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THE

LONDON MEDICAL AND PHYSICAL JOURNAL.

EDITED BY

RODERICK MACLEOD, M.D.

PHYSICIAN TO THE
WESTMINSTER GENERAL DISPENSARY,
AND LECTURER
ON THE THEORY AND PRACTICE OF PHYSIC, AND ON MATERIA MEDICA,
AT THE SCHOOL IN GREAT WINDMILL STREET.

(VOL. LIX.)

NEW SERIES, VOL. IV.

> Et quoniam variant morbi, variabimus artes;
> Mille mali species, mille salutis erunt.

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1828.

J. and C. Adlard, Printers,
Bartholomew Close.

THE LONDON
Medical and Physical Journal.

No. 347, VOL. LIX.] JANUARY, 1828. [No 19, *New Series*

> For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL PAPERS,
AND
CASES OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER AUTHENTIC SOURCES.

THE CIRCULATION.

Observations on the Phenomena of the Circulation.

By J. H. JAMES, M.D.

THERE is no one subject in physiology which has at all times attracted so much attention as this; and convinced as I am that it has almost been pursued to satiety, I would not now offer any additional remarks, if I were not persuaded that the explanations given are still very unsatisfactory, and that circumstances of important influence in the consideration of the question have been overlooked.

The limits of this paper will necessarily be brief: nevertheless, it must be my object to review, in as concise a manner as I can, the subject generally; for any partial consideration of detached parts or circumstances can only be productive of error.

The flow of blood through the arteries is first to be considered. These vessels constitute a series of pipes, always full, but only occasionally distended. At each impulse of the heart, they receive an additional quantity, which at the moment urges a portion of that contained in them into the minute vessels, and also causes them to dilate, which their elasticity allows; the impulse having ceased, then elasticity reacts on the contained blood, and expels the remainder of the surplus portion which has been received, so that directly at the systole, and indirectly through the agency of this elasticity, the heart is, in point of fact, every moment of time employed in propelling the blood. A jet is perceived in the large branches at the systole, but in arteries of less size than one-sixth of a line in diameter the stream appears uniform, which may be explained by the velocity of the blood sent by the direct impulse being so much retarded in its progress, that the velocity of the steam, as maintained by the elastic power, is hardly exceeded by it, and scarcely any difference can be perceived in the uniformity of the current: at least, such appears to have been the opinion of Mr. Hunter.

This doctrine has been assailed by many able physiologists, but more particularly by Bichat and Parry, who were, however, probably misled by the result of their experiments; a misfortune which has happened to not a few, and in this instance because they preferred trusting to observations made under unnatural circumstances, rather than to those which are constantly presenting themselves without any experiment at all. They found that, when arteries are exposed, they do not dilate, and therefore they concluded that it is not usual for them to dilate. Were a person, on opening the chest, to conclude that the lungs he saw collapsed were in their natural state, would he draw a fair conclusion? Exposed arteries in the living body remain contracted, for the same reason that they contract if cut, to avert injury.

If the senses are to be trusted, arteries do dilate in the usual state of the body, when not exposed: it is apparent in the pulse of superficial arteries; it is sensible in a finger surrounded by a ring. I have observed it as most evidently proved by the alternate rise and fall of matter collected in a deep ulcer in the groin, over the femoral artery. It is evident in the jet from a divided artery, and in the pulsation of one that is tied.

But I may be allowed to ask, if the elasticity of the arteries in the lateral direction is not employed, wherefore was it given? Are we warranted in believing that it exists without a purpose? and what is that purpose, if not that now assigned?

It is demonstrable that, without this elasticity, there would have been no equable flow of blood in the smaller vessels; but it must have been forced through them by sudden, violent, and probably injurious impulses.

From consideration of the structure of the heart, it is evident that a portion of time must be allowed for its cavities to fill, as well as to empty themselves: that portion of time is considerably the longest, and consequently the blood can only leave it by sudden impulse. This sudden impulse, violent in itself, would be succeeded by a state of quiescence of the blood, (which we can prove does not exist,) but for this provision in the lateral elasticity of the arteries, which, like the main-spring of a watch, receives the force of the heart during its short exertion, and gradually parts with it again; so that the force so derived from the heart is really acting while the viscus itself is filling, and no interval occurs when it is not employed in propelling the blood.

A great deal has been said on a point to which I deem it necessary to advert, namely, whether the blood flows through the arteries in waves. I have above stated that the arguments predominate against its flowing merely in column, (particularly the fact, that on such a supposition there would be no continued stream from a cut artery, which it is well known there is,) but does it flow in waves, as has been repeatedly asserted? I should think not; for the supposition will hardly account for the instantaneous impression felt at each beat of the heart in arteries remote from it.

Between these two theories it is not impossible to find out an intermediate, which may approach to the truth. There can be little doubt that at each impulse of the heart a shock is diffused over the arterial system, which propels the blood in a longitudinal direction; but is it not quite clear that, whenever this is felt, there must also be an impulse on the sides of the tubes? and if so, these sides, being yielding in their nature, would yield or dilate; and if elastic, they would return to their former state, as the power ceases which dilates them. This hypothesis of an instantaneous dilatation of the arterial system, however, differs entirely from that of successive waves flowing along them like ordinary canals, and much more accords with the facts observed.

The elasticity of the arteries lessens, as might be expected, as they become more remote from the direct impulse of the heart.

The arteries, in addition to their elasticity, it is well known possess a contractile power. This cannot be doubted: it only remains to inquire how this power is exerted.

It has been repeatedly asserted by men of high authority, that this power is employed in supporting the circulation. This assertion does not readily admit of being directly disproved; but to the arguments which have been advanced against it, and which are not perhaps very conclusive, I will add the following:—If the hypothesis were true, it follows either that the contractile power must be exerted at the same moment throughout, or irregularly: if the latter, it must put an end to all uniformity in the circulation. If at the same moment throughout, then it must either correspond with the systole of the heart, or not; if it corresponded with the systole, then it would prevent the admission of blood from the heart, and in no way tend to forward it: if not, it would follow, I conceive, that this fresh impulse, most powerful certainly as the contractility increases,—i. e. as the arteries diminish in size,—would generate a new jet of blood through the subsequent channels; which is not the case, and therefore it may be concluded that it does not exist.

What, then, is the use of this contractile power of the arteries? I should answer, to regulate the supply of blood. It opens or shuts these canals more or less, according to the demand made by the extreme vessels, just as the intelligent hand of the engineer opens or closes the valves of pipes which supply the different quarters of a city more or less according to their wants: hence the arteries going to a part are obliterated after it is removed; hence, if a part is increasing with more than ordinary vigor, all the branch pipes leading to it enlarge: they will enlarge on the instant if leading to parts of temporary activity, as the salivary, mammary glands, &c. and will contract with the same speed. They will contract to prevent hemorrhage, or enlarge to supply parts whose regular supply has been interrupted.

Such is the degree to which this contractile power can be exerted, that it can instantaneously close an artery which is divided; and these vessels close upon the last portions of blood in the act of death,—at least, so it appears to me. Dr. Arnott has called this point in question; but, in the first place, I am by no means sure that we are warranted in believing, with him, that the vessels, so called capillaries, do in point of fact exert the powers of capillary tubes, as he states; and in the second, I do not conceive that the flatness of the arteries after death is a conclusive argument, as he infers, against their having emptied themselves: although found in a flat state after death, they may have been cylindrical during the existence of contraction, and subsequently become flat when the contractile power has ceased, and the pressure of superincumbent parts has acted upon them. The capillaries of the lungs do not exhaust the pulmonary artery, which they would do, as well as the systemic capillaries the aorta, if capillary attraction produced that phenomenon. The real cause of the difference would take too long a time here to discuss.

No doubt the contractile force of the arteries is in constant exertion, not only in varying the size of the arteries, as may be required, but as maintaining a degree of resistance which regulates the admission of the blood into them at every systole of the heart, and which mainly contributes to produce many of the qualities of the pulse; as, for instance, its size, hardness, &c. &c., which will result from the combined influence of the force of the heart, and the greater or less resistance of the arteries, which resistance will be uniform as respects their elasticity, variable as regards their contractile power. I cannot, however, think that this resistance places them in the condition of rigid tubes, as has been asserted, or that consequently the circulation can be calculated upon data which might be allowed if this fundamental hypothesis were true.

The blood having quitted the arteries, returns through the capillaries and veins to the heart: we are next to inquire how this is effected.

The force of the heart, though lessened, cannot be considered as by any means expended when the blood has reached the capillaries; and that it will still materially support the circulation, there can be no reason to doubt. Dr. Arnott* states, page 495, that "the heart keeps up a tension or pressure on the arteries of about four pounds per square inch of their surface, and with this force, therefore, is propelling the blood into the capillaries." Now, if it be granted that the amount of arterial pressure is correctly calculated, there are many facts which seem to show that there is some error in the application; more particularly the diminishing momentum of the blood in the smaller arteries, which may, perhaps, be more justly considered as the true measure of the force in them derived from the heart, than that founded on calculations, such as those which arise from the general tension of the arterial system.

If a number of holes of different sizes be made at the same height in a vessel of water, allowance being made for the friction of the sides of the holes, water will flow through these holes in streams of equal velocity; but if we regard the streams of blood flowing from the amputated surface of a limb, we find that the velocity of the streams diminishes nearly as the size of the arteries, proving, I think, that it is not from an equal degree of tension, or pressure, or force that they flow. Again, while considering this subject, I cannot help observing that the calculations of Dr. Hales, and other investigators, may have been erroneously deduced, inasmuch as they calculate for the whole, from the force which they see belongs to a stream proceeding from one open artery, without taking into consideration that the universal sympathy of the vessels will throw the blood upon that point; and, if so, it cannot be taken as a fair measure of the ordinary force in such an artery. If this opinion is true, it would probably be found that opening other arteries during such experiment would lessen the force of the stream in a greater ratio than, upon Dr. Hale's calculations, it ought to do.

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* I cannot allude to Dr. Arnott's work without expressing my belief that it will prove exceedingly useful, and that the medical profession in particular is much indebted to him.

That the propelling power of the heart, however, is strongly exerted in support of the circulation through the capillaries and veins, is pretty evident, notwithstanding Bichat's opinion to the contrary; but that it is not the sole agent may be deduced from the consideration of many facts, and one of these, which is of an anatomical nature, appears to me of considerable weight. The veins of the lower extremities are much stronger than those of the upper, manifestly because they have to support a longer column of blood. Now, if the sole force which propelled this blood was derived through the arteries, might we not expect a proportionate difference in *their* strength also? whereas, between the thickness of the coats of the arteries and veins of the lower extremities little comparative difference can be perceived.

It may be very difficult to measure the precise degree of influence which ought to be assigned to the heart, and what to the capillaries; but the following phenomena, which have been often quoted, all prove that they possess powers.

1st. Circulation in animals who have no hearts.

2d. Circulation in the human fœtus without hearts.

3d. Circulation in the human subject during syncope, &c.

4th. Bleeding after apparent death, and the heart's action has ceased.

5th. The circulation of the porta, spleen, corpora cavernosa, placenta, &c.

6th. The progress of fluids in the lacteals and lymphatics, and in the excretory ducts of the testis and other glands.

To these I may add the following—

In cases of obstruction of the orifice of the aorta, when the aperture has been reduced to the size of a crow-quill, and arterial pulsation has scarcely been perceptible, I have seen veins bleed most freely, not surely from the heart's action.

If a tourniquet be tightly screwed so as to compress every artery of a limb, the veins, when cut, will bleed freely, and be completely emptied.

In ordinary bleeding, blood will not flow from a vein, of course, if none is admitted into a limb; but if there is, the strength with which it flows by no means corresponds, in many cases, with the force of the arterial pulsation.

These facts, however, only prove the power the capillaries have of propelling the blood; they do not prove that the circulation in the veins is influenced by them in common; but they render it extremely probable, and it is very easy to conceive that, if a number of these vessels are every moment discharging their contents into the veins, tubes which are constantly contracting the areas of their diameters as they meet; that such a force will be generated in the larger branches as will materially assist the venous circulation.

It has always been deemed necessary to assign some auxiliary causes, besides the propulsive force of the heart, to explain in a satisfactory way this venous circulation: of these, there are many so manifestly incapable of aiding it, that it is only astonishing that men of high talent should for a moment have deemed them worthy of notice. Such are, the increasing size of the veins facilitating the return of blood; which is manifestly erroneous; as the sum of the branches is, on the contrary, much greater than the sum of the trunks;—the greater size of the veins than of the arteries; this would, if any thing, in the upright posture of the body, be a disadvantage rather than otherwise, and can only facilitate the return from the larger half of the body when we are in a horizontal posture. The valves, which may and do prevent a reflux of the blood, but never can aid its advance, except during muscular action, when an influence is created similar to that of the forcing pump: the action of muscles, however, is only occasional, and we cannot admit an occasional cause as productive of a permanent effect. The pulsation of contiguous arteries has also been held by Bichat to be another means; but it is extraordinary that he should not have perceived that this must act equally in each direction, and consequently retard as much as it propels.

Two other hypotheses remain, which deserve very different consideration. I mean the influence of the thorax, or of the heart, in sucking in the blood, particularly the latter.

It strikes me to be an insuperable objection to the former, that if, during respiration, a sucking power were exerted in the columns of blood approaching the heart, it must equally act on those which are quitting it, and consequently it would retard the arterial circulation as much as it assisted the venous. It does not, however, demand much argument to refute an hypothesis which is now little entertained, and which, at all events, fails to explain the phenomena of the circulation in whole classes of animals, whose blood is ventilated without any motions of a thorax.

The hypothesis which attributes to the heart a power of suction as well as propulsion, has of late, I need not say, much engaged the attention of very able physiologists, who have supported or opposed it with much ability and perseverance. Some of the arguments stated in Dr. Arnott's work against it appear to me very conclusive, particularly that derived from the well-known fact that blood flows with great force from a vein below a ligature, which must of course intercept any suction power of the heart.

Dr. Arnott's experiment, page 510, with respect to the impossibility of drawing up a column of fluid through a tube immersed in a bucket of water, appears to me to fail in an important particular,—namely, that the fluids in the veins may be supposed to be maintained in equilibrio by that in the arteries; whereas, in the experiment stated by Dr. Arnott, there is no counterpoise provided for, and the cases, consequently, have not a just and perfect analogy.

There is, however, an important fact connected with the structure of the heart, which I think goes far to prove the impossibility of the theory,—namely, the extreme disparity in the power of the right and left sides. Now, if the return of blood through the veins were effected by the suction of the heart, we might not unfairly conclude that an equal degree of force would be exerted in drawing as in propelling it, as the approaching column is, in point of fact, larger than that which is quitting the heart; and, upon this supposition, it would also follow that, if equal work is to be done, equal strength would appear in the structure, as in truth is the case when equal work is done by both sides of the heart, as is evinced by the comparative strength of the right ventricle during the fœtal state, and when the septum remains open from malformation. But what is the usual relative strength of the two sides? Instead of being at all equal, it is just that which we may well suppose would correspond with the relative efforts on either side to propel the blood through the pulmonic arteries and general system respectively.

There is another consideration which may be strongly urged; namely, that on the hypothesis of the heart exerting a suction power, not the least interval of relaxation would be allowed for its fibres, which must commence the process of dilatation the moment they had completed that of contraction; a phenomenon so entirely opposed to all we know of the principles of muscular power and mode of action, that it would go far to make me doubt an hypothesis which must assume a fact so irreconcilable.

To conclude: if it be urged that my arguments do not rest on the basis of experiment, I must beg leave to say that it by no means follows that they are on that account less entitled to credit, if they are grounded upon accurate observation of natural phenomena. Experiments, after all, are but an auxiliary, though a valuable auxiliary, in our pursuit of truth, and they serve only to supply that information which our observations cannot deduce from natural phenomena; and, if the conclusions drawn from them are evidently opposed to those which do arise from the consideration of natural phenomena, we have the strongest grounds for doubting their accuracy.

In the sciences, experiments have led to error as well as to true knowledge, man not having always rightly interpreted them; which has been repeatedly shown, but in no way more remarkably than in this, that learned men have drawn different—often opposite, deductions from the same experiments.

That the knowledge resulting from the observation of natural phenomena is quite as much entitled to belief as that from experimental research, is proved by nothing more strongly than the fact that a large proportion of physical truths rest upon no other foundation, especially in the department of astronomy and optics, where experiments are, indeed, almost wholly out of the question. That the same reasoning will apply to the science of the animal economy, I feel fully convinced; and, as a strong example of the truth of this position, I may express my persuasion that attentive observation alone of all the phenomena which present themselves relative to the flow of blood during hemorrhage or otherwise, aided by the careful consideration of the structure of the heart and vessels, might have enabled Harvey to establish precisely the same conclusions respecting the course of the circulation as those which he arrived at by experiment; and possibly he would have done so, had he commenced the inquiry free from the prejudices which at that time incumbered the investigation.

Exeter; December 6th, 1827.

LIFE.

On Life. By Sir George Smith Gibbes.

(Continued from vol. iii. p. 407.)

Although, from a great variety of observations and experiments, which at various times, during upwards of thirty years, I have made on the animalcula infusoria, and although, from these experiments, I have been convinced of their importance in explaining many of the phenomena of animal and vegetable life, yet I never should have ventured to make my opinions public, until I saw that others had led the way in the same line of inquiry.

The subject having, however, been brought forward, I feel at liberty to detail some experiments corroborative of the opinions that have thus been promulgated.

If it be admitted that there exists a totally different series of laws which regulate the vital and the material world, it must be of importance to trace those laws in each instance.

There is no division of inorganic matter by which we can arrive at an ultimate living particle. In organised bodies we find a terminating rudiment, evidently endowed with a power of spontaneous activity, beyond the simplicity of which we cannot go. This is the *monas termo*, so called for that reason.

Some recent and most highly interesting views of the animal economy have appeared, wherein the composition of the human body is portrayed in a very novel and most curious manner.

"All the tissues of the animal body are shown to be ultimately resolvable into minute globules, and that these globules, as they are successively disengaged from the mass, exhibit distinctly a power of spontaneous activity, moving about rapidly in all directions. In short, they become animalcula, possessing the power of locomotion, and have been named Monades. It appears that these bodies are capable of existing as animals or vegetables, and of forming elementary parts of either.

"Thus, according to the above view of the subject, we arrive at the singular conclusion that the human body, with all its organs, is built up of animalcula, and that it is a congeries of countless millions of organised beings, each capable of living in a separate state, and perhaps exercising some of the functions of individual life whilst incorporated with our system. It is not certain, but it is at least probable, that these monades form the last link in the chain of organic life, and that beyond them there is nothing but the ultimate gaseous elements.

"They are the units, we may reasonably suppose, by the addition or subtraction of which all the parts of the body are daily enlarged or diminished.

"The process of digestion, perhaps, consists merely in the operations necessary to separate these monades from the combinations in which they existed in the animal or vegetable substances that form our food; and that of assimilation, in the mode of conveying them to, and depositing them in, the various parts of the body for whose nourishment they are destined."

In my last communication, I described the observations I had made on the part these animalcula perform in the growth of plants. In conformity with the object of the present paper, I shall describe some further experiments illustrative of the above view of the subject.

The green matter which spontaneously forms itself in vessels of water which are exposed to the action of the air, bears a strict analogy with the Conferva rivularis and the Tremella nostoc. If the property of producing oxygen gas during life and growth belong only to vegetables, it would appear from the experiments of Dr. Ingenhousz, that there exists in the three above-mentioned vegetables an insensible change from the animal to the vegetable kingdom, and vicê versâ.

Water which has been boiled, inclosed in an inverted vessel over mercury, does not produce the green matter, however exposed it may be to the light; whilst spring water, on the contrary, generally produces it under the same circumstances.

Boiled water, when exposed to the air and to light, will produce the green matter.

Boiled water contained in a vessel inverted over mercury, will produce the green matter, if any vegetable or animal substance be added to it, as blood, flesh, fish, bile, potato, indigo, &c. At first these substances are decomposed, the water gets turbid, and a mixture of hydrogen gas, azote, and carbonic acid are disengaged: the water at length becomes green, and, in the place of these airs, nothing remains but oxygen gas, in a state of very great purity. If this water be examined with a good microscope when it becomes green, we see a great number of animalcula, which move freely about it. In following our observations with these animalcula, we see them after a time relent in their movements, and unite together, forming the green matter.

If this green matter be suffered to dry, and be broken to pieces, and if the broken pieces be placed in water, animalcula, absolutely similar in form to those which had united themselves in the green matter, reappear, and move about freely in the water.

In observing this curious fact, which can be easily done by a drop of the water being placed in a concave glass, and covered over with talc to prevent evaporation, the round bodies, which are the animalcula, observe at first a perfect immobility: after a time they acquire an oscillating motion, which increases, and at last assume the same activity and vivacity that they had previously to their forming the green matter.

After this the animalcula reunite, and again form the green matter, which produces oxygen gas when exposed to the light.

From following these experiments with Dr. Ingenhouz, and in watching the progress of vegetation under a variety of experimental management, I have long since felt the conviction that vegetables acquire their growth under the instrumentality of the animalcula infusoria; and that the preponderating influence which the germ of either the animal or vegetable exercises seems to determine the *monas termo*, or its combinations, towards the formation of the one or the other.*

Although we may combine in numberless ways the ultimate elements of almost all food, oxygen, hydrogen, carbon, and axote, by chemical means, yet we never can produce that combination which will nourish animal life. That power belongs elsewhere, and must be sought for in the knowledge of the laws of vitality.

Bath; November 3d, 1827.

VACCINATION.

Vaccination in Turkey.

Sir,—I hope you will find it convenient to insert in your next Number the accompanying interesting letter. It is translated from a copy in French, which has been transmitted to me within these few days, by Dr. De Carro. The facts which it discloses, whether considered morally, medically, or politically, are very curious. He intended that it should appear in the second volume of my Life of Jenner; but as some time must elapse before it can be published, I think it wrong to withhold an account of this signal triumph of vaccination over national and religious prejudices till that event takes place. I therefore transmit Dr. A.'s letter for your Journal, which, during a long series of years, has evinced unwearied zeal and diligence in recording every important circumstance connected with the vaccine discovery.

I have the honour to remain, sir, most faithfully yours,

J. BARON.

Gloucester; November 2, 1827.

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* However we may be led by analogy to believe that the monades find a nidus in these organised bodies, and thus are disseminated throughout their substance, still we are compelled to allow, in all these combinations, that they form an integral part of each resulting organic production.

Copy of a Letter from Dr. Auban, *a French Physician, settled at Constantinople for upwards of thirty years, to* Dr. De Carro, *formerly of Vienna, now of Prague.*

If during so long a time I have not given you any sign of my being alive, it is because vaccination in this country no longer offered any thing interesting: but an event, which no one could have surmised, and which, in consequence, has astonished all those who have been made acquainted with it, ought to be transmitted to you.

Before announcing it to you, I should remind you that no Christian is ever permitted even to touch any prince of the Ottoman race, or still less to take blood from him in any way, or on any account. The great revolution that has been effected among the Massulman people since the destruction of the Janissaries has changed every thing! The troops placed on the footing of other European soldiers,—the musket with its bayonet,—the military music, and nothing played except European airs,—a drum-major, with his great cane in his hand,—the sappers preceding the regiments,—the Grand Seigneur himself in general's uniform, ordering certain manœuvres,—all these are the prodigies which one can with difficulty comprehend, and the whole brought about in a very short time indeed by one individual, but he, in truth, a great man!

Vaccination performed the 16th of May on three Sultans, or Sultanes, (a title given only to infants who are born on the imperial throne,) and two other young ladies of the harem, proves how much every thing has been changed amongst this people.

On the 14th of May, one of the physicians of the Sultan's seraglio begged of me to go to his apartments. He told me that he had received a message from the Echim Bachi, directing him to request of me to hold myself in readiness to go to vaccinate the children of the Sultan,—to have the vaccine matter always about me, and not to remove any distance from Pera. I remarked to him, that intrigues would cause some other person to be chosen to perform that operation. He replied to me, "There are no longer any intrigues that can cause the order of the Sultan himself to be altered, who has pointed out you on account of your age, your nation, and your name."

On the 16th, in the morning, an order for me to go to the palace with one of the physicians, who would act as interpreter, was transmitted to me. About nine o'clock we were shown into a chamber allotted to the Echim Bachi, who made no delay in coming. He caused the Kislar Aga (the chief of the black eunuchs) to be sent for, and immediately we three were introduced. At the first chamber where we stopped, we found a young sultan, seven or eight months old, who was vaccinated forthwith. A few minutes afterwards his elder sister, about a year and a half old, appeared; she was also vaccinated; and then was brought in a still younger princess, who was submitted to the same operation: and all this took place without the smallest difficulty or ceremony. In two other apartments, two young ladies were also vaccinated.

The verification was adjourned to the 23d of the same month. The Echim Bachi, being sick, did not come; but we were introduced notwithstanding, and all the persons vaccinated were found going on well, with a most beautiful (*tres-belle*) vaccine pock.

The 28th of the same month we returned to the palace, and the crusts which had formed left no fear about the maturation of the vesicles: all was finished, and complete. The Kislar Aga remitted me a very handsome present on the part of his highness, adding, "I have received this from the hand of the Grand Seigneur, to be given into yours. He has sent it to you also to testify his satisfaction with you. That which you received the first day was sent to you on the part of the mother of the two young princes. We will now go home, to return no more to this place until some new prince be born."

You have here, as I think, a piece of news which ought to be transmitted to you. If you wish for farther details, let me know, and I shall consider it a duty to satisfy you. All this was done without the least mystery.

Dr. GREGORY'S *Reply to the Animadversions of* MEDICUS *on his Paper on Constitutional Inaptitude to Cow-Pox.*

YOUR correspondent at Cheltènham is pleased to express his "surprise" at the request I made in a former Number of the Journal to be put in possession of the peculiar opinions entertained by Dr. Jenner on the subject of a constitutional inaptitude to cow-pox; and he cannot conceal his "astonishment" that I should not have known that they had been for several months before the world in an authentic form; that is to say, in the seventh chapter of Dr. Baron's Life. If such were his feelings then, I dread to think what they will be now, when I confess that I am still as ill informed as before, and that all I have gained from his remarks is the shrewd suspicion that he is in the same condition of ignorance with myself. If the subject had indeed been discussed in Dr. Baron's work, it would have been an easy task to have pointed at once to the exact page where it may be found. But no, sir, your correspondent favors us instead with some remarks on a speculative question totally different from the practical one at issue, and follows this up by a process of reasoning which, as he states, will furnish us with the required truth. "Dr. Jenner," he says, "teaches the actual identity of (or at least the close affinity between) small-pox and cow-pox. Now, as there exists in some persons a constitutional unsusceptibility of small-pox, a like inaptitude might fairly, *a fortiori*, be predicated of cow-pox."

The force of this specimen of medical logic, which is, I dare say, quite conclusive in the eyes of your correspondent, is however entirely lost upon me. If, indeed, the case were reversed, and we were deducing the laws of small-pox from those of cow-pox, I might, perhaps, acknowledge it; just as I admit that a man who is incapable of walking ten miles cannot, *a fortiori*, walk twenty: but the merit of the argument that, because a man cannot walk ten miles, therefore, *a fortiori*, we cannot walk one, belongs exclusively to your ingenious correspondent. He probably meant to say, *pari ratione*, (which, though a loose mode of reasoning, is still intelligible;) but he who stands forward to correct the trippings of others should be careful not to stumble himself.

But, sir, there is another peculiarity in this train of reasoning, which struck me even yet more forcibly. Your correspondent, having, as we have seen, argued himself into a conviction of the strict analogy subsisting between the susceptibility of small-pox and of cow-pox, deduces thence the further conclusion that the laws of constitutional inaptitude to cow-pox are therefore known to us. This, sir, is, in my humble opinion, neither more nor less than what logicians call an argumentum *ab ignoto*, or *ad obscurius*. It attempts to explain one thing by reference to another, even less intelligible.

What are the laws of constitutional inaptitude to small-pox? At the risk of exciting the highest conceivable degree of astonishment in your correspondent's mind, I am free to confess that they are, in a great measure, unknown to me. Nay more, sir, I trust the time may never arrive when experience shall teach them to me; for I am as great a foe to inoculation as your correspondent at Cheltenham. That they were known to Baron Dimsdale and the professed inoculators of the old school, I can readily believe; and perhaps there may be some persons still engaged in practice to whom memory may make them familiar; but I think I can see, in the general tone of your correspondent's remarks, sufficient proof that he does not belong to that class.

The youngest of your readers can hardly have misunderstood me so far as to suppose that, when asking for Dr. Jenner's opinions regarding the unsusceptibility of cow-pox, I imagined him ignorant of the main fact that some constitutions were indisposed to it; but I wished to ascertain *how far* he had prosecuted this branch of the subject. To prevent all possible misunderstanding, however, in future, permit me to request specific answers from your correspondent Medicus to the following queries, with a hope that, instead of an argument *a fortiori*, he will favor me with the exact authorities (chapter and verse) on which his replies are founded.

1. Had Dr. Jenner any, and what, opportunities of witnessing a constitutional inaptitude to cow-pox existing *through life?*

2. Did we find the inaptitude to cow pox more or less prevalent than that to small-pox?

3. Did he observe that, for the most part, these conditions coexisted in the same individual?

4. Did he imagine that the inaptitude to cow-pox increased or diminished with the progress of life?

5. Could it, in his opinion, be obviated by any medical treatment?—and if so, by what means—whether purgatives or antimonials?

6. Did he consider that a constitutional inaptitude to cow-pox, clearly proved to exist for one or two years, authorised the adoption of variolous inoculation?

This, sir, is a mere sample of the questions now frequently put to me by persons both in and out of the profession, touching the constitutional inaptitude to cow-pox. Although holding what your correspondent is pleased to call the "highly responsible" office of physician to the Small-Pox and Vaccination Hospital, I candidly confess my inability to answer them satisfactorily. If your correspondent will supply the deficiency, with reference to authorities of easy access, I will then submit, and willingly acknowledge the justness of his animadversions, however harshly they may at first have sounded. In such a case, too, sir, I will take upon myself the blame of having occupied needlessly two pages of your valuable Journal.*

8, Upper John-street, Golden-square;
December 5, 1827.

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* Should Medicus answer this "Reply," we hope he will have the goodness to do it in his own name.—Editor.

ERYSIPELAS.

Cases of Erysipelas, treated at the MIDDLESEX HOSPITAL.

WITHIN the last few weeks, a great many cases, both of phlegmonous and idiopathic erysipelas, have been admitted into this hospital; and of these the following have been selected, as exemplifying the variety of treatment which erysipelas requires in some of its different forms.

CASE I. *Treated with Fomentations.*

Thomas Briant, fifty years of age, a stout athletic porter, was admitted on Friday, the 28th of September, into the hospital, with phlegmonous erysipelas of the hand and forearm. He stated that, five days previously, he received a small punctured wound in the elbow from a spike. This, however, caused him so little uneasiness, that on the next day he went to his usual employment; but, the same afternoon, he felt a good deal of pain in the elbow, which obliged him to leave his work; and in the evening he had a severe rigor. On the Wednesday the arm had become painful, and was slightly swollen; it continued increasing until the Friday, when he came to the hospital.

When admitted, the hand and forearm were considerably swollen, and very tense, yielding to firm pressure, and of a dusky red colour. His pulse was small and exceedingly rapid; his tongue coated with a brown fur; skin hot and dry; and his countenance expressive of great anxiety.

> **The treatment consisted in warm fomentations of Poppy-heads to the arm, with a purge of Jalap and Calomel.—Hyd. Subm. gr. v.; Ant. Tart. gr. ¼; Opii gr. ss. nocte.—Haust. Potassæ supertart. ℥jss.; Vin. Ant. Tart. ʒj. quartis horis.**

29th.—His arm is much less tense, and is neither so red nor so painful. He has slept some hours during the night; his bowels are freely open; his tongue is moistening. The erysipelas is extending towards the shoulder. He complains of slight pain in the chest, with some cough.

> **Continue.**

30th.—The arm is much less painful, is not so tense, and has more of its natural colour. The wound of the elbow discharges very freely, and from the appearance of the discharge it is supposed that the wound has penetrated the joint.

> **Continue.**

October 1st.—In every respect much better: the arm is soft, and the erysipelas is disappearing.

> **Ordered to continue the Salines without the Antimony, and to have five grains of Dover's powder at bedtime.**

2d.—He continues improving; and, as all inflammatory symptoms are subdued, he is ordered a more generous diet, with the infusion of Bark, and three drachms of the Liquor Ammoniæ Acetatis three times a day.

From this date he continued daily getting better: the erysipelas left him, the arm recovered its natural size, and the wound ceased discharging; and, on the 9th, he was deemed sufficiently well to leave the hospital, and be made an out-patient.

Case II. *Treated with Scarifications.*

29th September, 1827.—John Allwright, æt. fifty-three, a poor half-starved labourer, in removing some slates from a barge, about a fortnight previous to his admission, lacerated the little finger of his right hand. He paid little or no attention to it until four or five days back, when the finger became painful, the pain running up to the axilla, and the arm began to swell.

When brought here, he had an ill-conditioned suppurating wound on the little finger; the hand and forearm were prodigiously swollen, of a bluish dusky red, very tense, slightly œdematous in parts, and very painful. There was also a blush of erysipelas extending to the shoulder. His pulse was small, and very rapid (140); his tongue coated with a brown fur; bowels costive; and his countenance flushed, haggard, and very anxious.

Some bands of integuments, which strictured the finger, were divided, and slight scarifications through the skin were made on the hand and arm.—Ordered Poppy fomentations locally.—Hydr. Subm. gr. v.; Ant. Tart. gr. ¼; Opii gr. ss. s. et p.—Infus. Sennæ comp. ʒxj.; Magn. Sulph. ℥iij.; Tr. Jalapæ ʒjss. sextis horis donec alvus plene dejic.

30th.—Is somewhat more free from pain, but no decided diminution in the swelling or inflammation.

Liq. An. A. ʒiv.; Magnes. Sulph. ℥ijss.; Vin. Ant. Tart. ℥j.; Mist. Camp. ℥viij. sextis horis.

On the 1st of October, he was somewhat better; the arm not so tense nor so painful; bowels freely open; tongue cleaning; pulse softer; and his countenance less anxious.

Ordered to continue the Salines, with Calomel and Dover's powder at bedtime.

From the 1st to the 6th, he continued much in the same condition: the constitutional irritation somewhat abated, and the local disease gradually diminishing.

6th.—He has passed a restless night, and this morning complains of pain in the forearm: it is again much swollen, and the chain of absorbents on the inner side of the arm are greatly inflamed; the hand is swollen and tense; his tongue pasty, and his pulse small, with heat of skin and great irritability.

Scarifications, of an inch in length, were freely made over the hand and arm, and the tension is much relieved.—Ordered to continue the Salines, with three grains of Calomel and five of Dover's powder at bedtime.

8th.—He has passed a restless night, with frequent delirium; his countenance is expressive of great suffering; his pulse very small, and exceedingly frequent; and his tongue coated with a brown fur. Matter had formed at the wrist; and a large and depending opening was made, and about eight ounces of good pus evacuated.

Ordered nutrients, with the Infusion of Bark and the Liq. An. A.

From this date to the 31st, he continued improving: his tongue became clean, the bowels were regular, and his pulse quiet and natural, and he was gaining flesh and strength. The discharge from the wrist was good, and less in quantity. Abscesses successively formed in the hand; and these were opened early, and caused little uneasiness.

On the 31st, a patient in the same ward was carried to the theatre to suffer amputation: the sight of his fellow sufferer, brought down pale and blanched, and without his limb, so alarmed his naturally nervous constitution, that erysipelas again attacked the hand and arm. It was ushered in with a rigor, and a dry tongue and rapid pulse. The treatment consisted, as in the former attack, in the exhibition of Calomel and Antimony, with Salines; but his pulse sunk so rapidly under this treatment, that recourse was immediately had to bark and wine. From this attack he slowly recovered, very much emaciated, with the hand considerably swollen, and œdematous; and with a number of small abscesses forming between the fingers.

November 10th.—On this day he complains of his elbow, and matter is forming at the lower part of the joint. An incision was made into it, and about four ounces of matter were discharged. The arm has assumed a dusky brown appearance; the hand continues of the same size, and the thumb has become useless from the destruction of the ligaments of the joint; the matter has found its way under the tendons and theca, and he has lost the power of the muscles. His health is better; he sleeps well; has a clean tongue and natural pulse, and he eats his food with appetite.

He is taking wine, with two grains of the Sulphate of Quinine in Infus. Gentian comp. three times a day.

12th.—A consultation has been held this day by the surgeons, and, considering the uselessness of the hand, his thumb being destroyed, the great suffering he must undergo in the attempt to save it, and the improbability of his constitution bearing up against the discharge, amputation has been determined on, and proposed to him.

He has not consented to the operation, consequently he remains much in the same condition; and this day (18th) he has an attack of diarrhœa. The hand and fingers are separately encircled with rollers, and gentle pressure is made on the sinuses. It does not discharge much. The arm has assumed a better colour; and, independently of his diarrhœa, he is much as he was.

15th.—Amputation is again proposed to him, but he dreads the operation, and will not consent to its performance.

25th.—He has been mending, on the whole, since the last report: the hand is somewhat smaller, the abscess at the elbow has healed, and the arm has assumed a more natural hue. He eats and sleeps well, and is altogether much improved.

Amputation was again hinted at, and the uselessness of the limb was pointed out; but the poor fellow was so much alarmed, that he suddenly left the hospital on the 29th of November.

CASE III. *Treated with Leeches and Incisions.*

October 17th, 1827.—Jane Tooler, æt. eighty-one, a robust and healthy old woman, fell, and struck her right elbow against a stone; two days afterwards she applied at this hospital for assistance. She says that the previous evening she had a shivering fit, which was followed by vomiting, and that during the night she was hot and restless, and could not sleep. The hand, forearm, and arm, were greatly swollen, of a dull bluish-red colour, very tense, and slightly œdematous on pressure: she does not, however, complain of pain in it. Her face is flushed and anxious; her skin hot and dry; tongue brown and coated; and pulse very rapid, and exceedingly small. There is a trifling abrasion of the skin at the elbow, covered with a slough.

Treatment.—Hirudines xxx. above the inflamed surface.—Fotus Papaveris cum Cataplasm Farinæ vulneri.—Hydrarg. Subm. gr. v.; Antimon. Tart. gr. ¼ st.—Ol. Ricini ℥j. post sex horas.—Haust. Potass. Supertart. ℥jss.; Vin. Ant. Tart. ʒss. sextis horis.

In the evening, the leeches had not relieved the tension of the arm, and there was considerable pain. An incision was therefore made, about four inches in length, through the integuments down to the fascia, on the superior and outer surface of the arm, and about eight ounces of blood flowed from the wound.

18th.—She has slept during the night, and expresses herself free from pain; the arm is much less tense. The incision is discharging a sero-purulent matter; the tongue is cleaning; bowels freely open, and pulse softer.

Ordered to continue the Salines, with fomentations to the arm.

She continued daily improving, and on the 22d the erysipelas had entirely vanished, and the wound of the incision was granulating kindly; the arm has regained its natural size, and she expresses herself quite well.

She is ordered Bark and Acid, with meat diet.

The wound filled up with granulations, and on the 7th of November she left the hospital, with the wound healed and the arm quite well.

CASE IV. *Treated first with Antiphlogistics, afterwards with Quina.*

Charles Bennett, fifty-one years of age, was admitted into the Middlesex Hospital with a fatty tumor on the right shoulder, over the deltoid muscle. On the 15th of October, this tumor was removed by Mr. MAYO; and on the 19th it was dressed, and the wound looked well, and was uniting kindly.

22d.—This morning he complains of being very sick, and says that he had a rigor last night, and that he has passed a bad and restless night. His pulse is full and sharp, and his tongue foul. A blush of erysipelas is seen spreading from the wound of the shoulder over the arm and chest.

Treatment.—Pulv. Ipecac. ℈j. Ant. Tart. gr. j. statim.—Hydr. Subm. gr. iv.; Ant. Tart. gr. ¼, nocte.—Liq. An. A. ʒij.; V. Antim. Tart. ʒss.; Magn. Sulph. ℥jss.; Mist. Camph. ʒx. sextis horis.

23d.—The erysipelas is spreading over the chest, and has now reached the ribs. He complains of great thirst.

Continue the medicines, with Pulv. Ip. co. gr. v. nocte.

25th.—The erysipelas now extends over the chest, back, and shoulders. He has been taking the Salines and Antimony, with Calomel and Dover's powder at night. His tongue is dry and brown, and his pulse small and rapid.

Continue.

29th.—The erysipelas is ascending the neck, and the whole upper half of the body is fully covered with the inflammation. The tongue continues brown and furred, and the pulse is small and feeble. As it is imagined that antiphlogistic measures have had a fair trial, he is now ordered—

Quininæ Sulph. gr. ij.; Infus. Gent. comp. ℥jss. sextis horis.

November 3d.—The erysipelas has now left the body, and is spreading over the head and face. He continues taking the Quina, with the addition of five grains of the Carbonate of Ammonia three times daily.

7th.—The erysipelas has entirely left the head and face, and he is now only complaining of weakness and debility. The wound has entirely healed, and he is merely kept in the hospital that he may recover his strength prior to his dismissal.

CASE V. *Treated on the same principles as the preceding.*

Charlotte Newman, forty-seven years of age, a poor emaciated woman, was admitted on the 2d of October, with an impetiginous eruption on both legs. For this complaint she had the compound Calomel pill at night, and the decoction of Sarsaparilla.

The eruption was disappearing, and the ulcers were fast healing, when she was attacked with a severe rigor on the 25th, followed by sickness of stomach, an inclination to vomit, and general febrile symptoms; a brown and dry tongue, and a small and rapid pulse.

An emetic was given, and in the evening she was much relieved.

On the 26th, the symptoms were somewhat aggravated; and, on looking to the legs, an erysipelatous blush was seen on the right one, commencing at the foot, and ascending upwards.

She was ordered five grains of Calomel, with a quarter of a grain of Antimony, at bedtime; and effervescing aperient Salines, with small doses of Tartarised Antimony, every six hours.—Poppy fomentations to the leg.

On the 29th, the erysipelas had reached the knee of the right leg, and had attacked the left one.

Ordered to continue the Salines, with three grains of Calomel, and ten of Dover's powders, at bedtime.

31st.—The erysipelas had progressively spread up both thighs; the tongue was as dry and as brown as at first; the pulse was feeble, small, and extremely rapid; she was weak and sinking. Antiphlogistic measures, which had been pursued from the first, were now considered not only useless, but prejudicial to the patient; consequently she was ordered six ounces of wine, with beef-tea and other nutrients.

On the 2d of November, she was much improved; the erysipelas was disappearing, the bowels were open, and the pulse became quiet and fuller.

Ordered to continue her wine, with Bark and the Liq. Am. A.

5th.—The erysipelas has nearly disappeared. A slough has, however, formed on the outer ankle of the right foot, and the sacrum is becoming tender. The tongue is not so clean, and she has some diarrhœa.

Ordered Dover's powder at night; to omit the Bark; and to take half a drachm of the compound Tincture of Bark in every glass of wine.

10th.—The sloughs are separating; the bowels act regularly; the tongue is again clean, and the pulse natural: she is, however, weak, and much emaciated.

Ordered eight ounces of wine daily; two grains of the Sulphate of Quina made into a pill with some Extract of Conium, every six hours.

18th.—The sloughs have separated from the back and ankle: she is, however, becoming weaker every day.

She has three ounces of brandy, with ten of wine, per diem. Two grains of the Quina, with the Carbonate of Ammonia, three times a day.

This poor woman gradually sunk under the process of sloughing, and died November 23d.

Case of Inflamed Vein and extensive Phlegmonous Erysipelas of the Arm, following Venesection, treated by Incisions. Under the care of Mr. EARLE, at ST. BARTHOLOMEW'S HOSPITAL.

MARGARET GEARING, æt. twenty-four, a maid servant, presented herself as a casualty patient on the 28th of July, 1827. She stated that she laboured under a suppression of the catamenial discharge, and requested to loose blood, from which she always experienced immediate relief. She was bled by the dresser, and no more was heard of her till the afternoon of the 30th, two days after venesection had been performed: she then stated that, on the evening of the 29th, her arm became uneasy, which induced her to remove the bandage, and, upon examining the wound, she found it somewhat festered, and painful to the touch. She applied a poultice, and took a little opening medicine. On the 30th, she felt exceedingly unwell, her arm becoming more painful, and she begged to be admitted into the hospital.

The following symptoms were observed:—The arm, about the elbow joint, is a little swollen and painful on pressure; the wound in the vein is open, and contains a small quantity of pus; the vein is also thickened around the puncture, and upwards to the extent of half an inch; red lines, extending in the course of the absorbents, can be distinctly seen. Her countenance is anxious; skin hot and dry; pulse 100, and hard; tongue furred; bowels somewhat confined.

V.S. ad ℥xvj. (which produced syncope.)—Hyd. Submur. gr. iij.; Pulv. Antimon. gr. v. statim.—Mist. Salin. cum Mag. Sulph. ʒj. quartis horis. —Cataplasma panis brachio.

July 31st, at eight A.M.—She was seen by Mr. EARLE. The arm was now greatly swollen; erysipelatous inflammation extending from six inches above the elbow joint to the wrist; the integuments were tense and exceedingly painful. She complained of pain extending towards the axilla, the glands of which were tender to the touch. The constitutional symptoms are aggravated; pulse 100, rather more compressible. Blood drawn yesterday not buffed.

Mr. Earle stated that, unless the inflammation and tension of the limb were soon relieved, extensive sloughing of the cellular membrane would, in all probability, ensue. With the view of preventing an occurrence so likely to endanger the life of the patient, he immediately made two incisions, of about three inches in length, along the upper part of the forearm, extending down its radial side: these incisions extended down to the fascia; the cellular membrane did not appear to have yet undergone any change, but was exceedingly vascular, and cut crisp. About ten ounces of blood flowed from these incisions in the space of two hours. She expressed herself as being much relieved. Tension of the limb somewhat subsided, nor is it so tender to the touch.

The arm to be well fomented.—Continue the Saline Mixture, with Sulph. Magnesiæ.

August 1st.—She had passed a more comfortable night: pain, tension, and redness of the limb has entirely subsided. The constitutional symptoms are, however, yet severe: pulse ninety-six, and hard; tongue furred, with much pain in the head; skin rather hot; bowels inclined to be costive.

V.S. ad ℥xij.—Haust. Sennæ statim.

2d.—Feels much relieved. The arm is now of the natural size. The blood drawn yesterday was buffed.

Ordered Mist. Salin. cum Potassæ Nit. gr. viij. quartis horis.

Ten P.M.—She feels very uneasy; there is increased heat about the carpal extremity of the forearm, which is tender on pressure.

Ordered Hirudines xij. brachio. Postea Cataplasma panis.—Calomel gr. iij.; P. Antimon. gr. v. statim.—Contr Mist. Salin. cum Pot. Nit.

3d, eight A.M.—She is much worse. The inflammation is extending up the forearm; the integuments about the wrist and back of the hand are exceedingly tense and painful; countenance flushed; skin hot and dry; tongue furred, and bowels costive.

During the night she had a smart attack of shivering. The patient strongly urges that another incision may be made. One of four inches in length was accordingly made on the outer side of the wrist; a small quantity of pus was seen oozing out with the blood which flowed from the wound; a small portion of cellular membrane at the lower part of the wound looks in a sloughy state. About four ounces of blood were lost from this incision. The patient felt immediate relief.

The arm to be well fomented; after which, let it be covered with a bread poultice.—Calomel gr. iij.; Pulv. Jalap. gr. xv. statim.—Contin^{r} Mist. Salin. cum Pot. Nit.

4th.—All unfavorable symptoms have left her. The arm is quite free from inflammation; the integuments have resumed their natural appearance. Bowels have been well opened by the Calomel and Jalap; pulse very feeble; the wounds are looking remarkably healthy.

Continue the poultice.—Ordered Inf. Cascar. ℥jss.; Tr. Card. c. ʒj. ter die.—Strong broth diet.

10th.—She is gradually regaining her strength. The two upper wounds have nearly healed; a portion of cellular tissue has sloughed away from the lower one, which in all probability is the cause of its not healing so readily as the other incisions.

Cont^{r} med.

19th.—During the night she had an attack of fever, accompanied with severe pain in the head; tongue furred; skin rather hot; complains of thirst.

Applic^{r} Hirud. x. temp.—Ammoniæ Subcarb. gr. xv.; Acid. Citric ℈j.; Mist. Camph. ℥jss. quartis horis, in active effervescence.

The two upper incisions have cicatrised. Another small portion of sloughy cellular membrane was removed today with a pair of forceps from the lower one.

21st.—Passed a comfortable night, and is much better.

Cont^{r} med.

23d.—Not so well. Febrile symptoms have again returned; complains of nausea and headache.

Ordered Calomel gr. iij.; P. Antimon. Tart. gr. j. statim.—Mist. Salin. cum Pot. Nit. quartis horis.

24th.—The medicine has produced several copious evacuations, of a dark colour. Feels greatly relieved.

Cont^{r} Mist. Salin. cum Pot. Nit.

20th.—The lower incision has now quite healed; she has perfect use of the limb. Her health rapidly improves.

Ordered Sulph. Quinine gr. ij. cum Inf. Menth. Sulph. ter die.

30th.—She was discharged quite well.

Remarks.—Mr. Earle considered this a well marked case of phlegmonous erysipelas, and an illustration of the good effect of incisions in the early stage of this disease. That these incisions will relieve the tension and pain of the part, and prevent the sloughing of the cellular membrane, this case alone will exemplify; for we find that where the incisions were made in the upper part of the arm, no sloughing of the cellular membrane took place, while at the lower part of the arm this process was not altogether prevented, from the incision being made at a later period of the disease: and there is little doubt but that this last incision prevented the further progress of mischief.

ANEURISM.

Case of Diffuse Aneurism. Treated by Mr. GUTHRIE, at the WESTMINSTER HOSPITAL.

THOMAS ELLIS, æt. seventy-two, admitted December 4th, with a large tumor, situated in the middle of the internal part of the right thigh, into which an opening had been made two days previous to his admission into the hospital, by a medical practitioner. He gave the following account of himself:—About two months since he had been cured of an anasarcous swelling of both inferior extremities, and about the same period he first perceived the swelling of the thigh. It was at first attended with much pain, and that sense of throbbing peculiar to topical inflammation: does not recollect ever to have perceived pulsation, by feeling it with his hand. His medical attendant applied cold lotion, but the pain and swelling still increased. He afterwards applied hot fomentations and poultice, up to the time of the incision. The patient states that the incision made by the surgeon was deep, and that a considerable quantity of fluid and coagulated blood came away; since which he has been losing blood in considerable quantities.

On his admission into the hospital, there was an oozing of arterial blood, for which a tourniquet was applied over the femoral artery, and which restrained it.

At seven P.M. Mr. GUTHRIE saw him, and immediately stated that, in his opinion, it was a case of diffused aneurism. He was taken to the operating room, and in moving him there was slight arterial hemorrhage. Mr. WHITE and Mr. Guthrie decided that the best chance of saving the man's life was amputation of the limb; to which the patient, after some reluctance, submitted.

The operation was performed by Mr. Guthrie. There was no tourniquet applied. Mr. White compressed the femoral artery with his finger during the operation. There certainly were not four ounces of arterial blood lost. He was removed to bed, and ordered Tinct. Opii gtt. xl.

December 5th.—Has had a tolerable night; feels comfortable; pulse ninety; tongue clean and moist; bowels have not been open.

℞. Potass. Carbon. ʒss.; Aquæ distillat. ℥ss.; Magnes. Sulph. ʒss.; Syr. ʒj. fiat haust. quarta quaque hora sumend. c. Succi Limon. ℥ss.

6th.—Has had a bad night; been delirious; bowels still confined; tongue foul.

To go on with his medicine.

12th.—He has been gradually sinking, and expired this evening.

Remarks.—In the morning after the operation, Mr. Guthrie examined the limb, and found the femoral artery not much enlarged, but ruptured in two parts: the continuation of the artery presented no symptoms of disease. Mr. Guthrie observed that this was a case of diffused aneurism, but which had not been attended by the usual diagnostic symptoms; and that a well-informed medical man, (as, from personal knowledge, he could state the practitioner to have been in this instance,) might, for want of the distinguishing symptoms, be mistaken. A large quantity of clotted blood was found in the sac. The artery was ruptured about its entrance into the tricipital canal, but had not been injured by the puncture. The friends would not allow the body to be examined.

Report of Cases treated at the ABERDEEN NEW DISPENSARY *and communicated by* ALEXANDER RAINY, senior Pupil.

(Continued from vol. iii. p. 487.)

VI. INJURY OF THE SPINE.

March 11th, 1827.—James C—, ætatis forty-eight. Found this patient supported in a chair, and in an insensible state, with his chin resting on his breast, unless when raised by assistants. He was pale, and his pulse at the wrist was not to be distinguished, nor could the heart's motion be felt through the thoracic parietes. While unloading a cart a few minutes previously, a heavy cask had fallen on his breast, by which he was driven to the ground, his head against the wall, and the cask above him. Stimulants were given, and, when reaction appeared, a vein was opened, from which the blood flowed at first drop by drop; he was then able to speak a little, but not reply to questions. Pulse now sixty, very weak. On examining the body very carefully, it was found that the vertebra dentata could be more distinctly felt than in the natural state, while the atlas seemed to have receded, and the muscles of the part were on the stretch, notwithstanding the head was thrown back during this examination. The head, left to itself, fell forwards till the chin rested on the chest, and, as the insensibility disappeared, it was irregularly and spasmodically darted forwards. The legs and arms were completely paralysed, being pinched or pulled with any violence without the least sensation of uneasiness. The man was conveyed home; a door was laid on his bed, sloping from the top to the bottom; over this an even mattress was placed, and he was extended on it, while the head was drawn with some firmness in the line of the vertebræ. After this, the muscles on the stretch relaxed, and the dentata seemed less projecting, while the pulse became fuller and stronger, though of the same frequency as before; and he expressed a desire to evacuate the contents of his bowels. The head was secured by tapes in the proper posture, and he was left for the night.

12th.—Had a natural stool last night, and urine this morning; both after some effort. Body under the neck somewhat colder than the head, which appears flushed. Muscles still insensible in the extremities; slight sensation in the muscles of the chest and abdomen. Slept none all night. Pulse oppressed; the same frequency. Was bled again to fifteen ounces, during which the pulse rose in strength. At the end of the operation it began to get weaker, and was stopped. The prick of the lancet was not felt, through the lower jaw was convulsively drawn up when the wound was made, or when touched during the operation.

Friction with the flesh-brush and mustard flour, for an hour at a time, twice a day.—Three ounces of black draught.

Seven P.M.—Purgative has just operated. Felt some stinging in the arms and legs during the application of the brush. Face still flushed, but no headache.

14th.—Yesterday had severe pains in the bowels, which were a good deal distended with flatus. Ordered fomentation of chamomile, which eased the pain; and an enema, which was not, however, exhibited. Towards evening, severe retching, unrestrained by a cardiac mixture, and only abated when he turned to his side, in which posture he was supported some hours. Bowels still much distended. Has had a discharge of urine twice today, but complains much of the efforts necessary to void his fæces, which are free. Enema ordered. Frictions have been discontinued today.

16th.—Friction resumed yesterday. Has some feeling in the right arm and left leg; knows when a cold hand is laid on them, or the skin pinched. Yesterday morning, after a tolerable night's rest, was waked by severe pains in his lower extremities, which continued till the visit in the afternoon, when they were eased by substituting the anodyne liniment for the mustard. Today, occasional darting pains through his legs; once or twice his right leg was involuntarily drawn up with considerable force and excruciating pain. In lying, he bends the right thigh a little towards the body, and can maintain it in that posture for a few minutes. The anodyne at night invariably produces vomiting, and consequently left off. Bowels loose yesterday; one natural stool today. Can pass his water with great ease, but still complains of the exertion at stool. Pulse seventy-two, full and soft; tongue dry and clammy; occasional nausea. Ordered the saline effervescing draughts. Bowels distended with flatus. Beer, which he drinks in considerable quantity, to be denied him.

As the details of this case are given at considerable length, we are compelled to give a very abridged account of what remains. As the frictions seemed to be very beneficial, they were not discontinued till a few weeks ago. Blisters were applied along the spine in succession, and kept discharging as long as they could be borne. The remainder of the treatment was confined to regulation of digestive organs. The feeling and power of motion were restored to the lower extremities two months after the accident, so far as to allow his walking across the room, with as much assistance as was required to hinder him from falling backwards, which he would readily have done if left to himself. The right arm is so far restored as to enable him to take food with that hand, but the left remains in a very powerless state. He now walks about the city for many hours daily, but is unable to apply himself to any employment, from the unsteadiness of the muscles of the back and legs. It is proposed to try the effect of electricity on the left arm.

We are afraid to hazard any opinion on the above case: it seems evident that the ligaments connecting the atlas to the dentata were ruptured, and it is only surprising that life was preserved. Notwithstanding two months of close confinement to bed, the patient's health at that time was good.

VII. GLOSSITIS.

Case I. June 27th.—John Ogilvy, æt. fifty-five, has swelling of tongue to such an extent as to prevent deglutition and speech entirely; cannot put the tip of the tongue over the incisor teeth. Complaint of two days' standing. Has the charge of a steam-engine, and exposed to alternations of heat and cold. Had a rigor on leaving work three days since, and has been always sick on going out during that time. Constant dribbling of saliva from the mouth; bowels costive; pulse seventy-eight, weak.

Sixteen leeches applied to the jaws. Purgative enema.

30th.—Relieved in a slight degree by the leeches. Can articulate so as to be understood. Bowels opened by the enema.

Repeat the leeches. Apply blisters behind the ears; dress with savine ointment. Let him endeavour to swallow three and a half ounces of black draught.

July 1st.—Bowels well opened; speech freer; cannot put out the tongue. Blisters discharged well.

2d.—Tongue considerably reduced, but cannot be put out farther than the lips; marked over its margin with pits, corresponding with the teeth opposite to which it lay when much swelled, and into the interstices of which it had forced itself. Bowels slow.

Repet. Haust.

6th.—Tongue much reduced, though his speech is yet a little thick and confused. Dismissed.

As glossitis occurring as an idiopathic disease is rather unusual, it will not be deemed improper to go back a few months for the following case:

Case II. January 31st.—Mrs. Conolly, æt. thirty-two, married, but childless, caught a severe cold three days ago, when she says the throat was much swelled, with stiffness at the root of the tongue: deglutition of fluids being impossible, on account of going, as she described, "into the wrong passage," and bringing on severe cough. This increased till the whole tongue became swollen and stiff. She cannot now bring the teeth close, on account of the size of the tongue, which fills the mouth. Continual, and very troublesome, running of saliva from the mouth. Cannot articulate so as to be understood, farther than yes or no. Face is somewhat flushed; pulse 100, full and hard; bowels costive; no sleep for two days.

V.S. ad ℥xvij. Cathartic enema. Feet to be bathed in warm water; and a dozen of leeches to the angle of the jaw.

February 1st.—Swelling as yesterday; patient extremely fretful and impatient. Enema brought away some hard fæces. Saliva dribbling away in greater quantity than before. Makes signs that the neck feels stiff and sore; pulse ninety-two, soft.

Repeat the leeches and enema, and, after the bleeding, apply blisters along both sides of the lower jaw, as far as the chin, and dress with savine ointment. Inhale the steam of warm water, if possible, by the mouth.

2d.—Can close the mouth, and articulates so as to be understood with some difficulty. On these occasions the saliva runs from the mouth. To endeavour to swallow some of the Mist. Purg. today, as the enema brought nothing last night.

4th.—Complains bitterly of the pain of the blisters, which are discharging freely. Voice still somewhat indistinct; tongue can now be seen, and is of a red shining appearance. Purgative, which she swallowed yesterday, has produced several copious dark stools. Repeat the cathartic.

After this, she remained for a fortnight with inflammation of the right tonsil, which, in spite of the active measures employed, went on to suppuration; the digestive organs becoming seriously deranged, with bilious vomiting.

VIII. SUDDEN DEATH.

August 1st, 1827.—James Mathews, æt. forty-eight: cough, with purulent expectoration; lies with difficulty on the right side; rest disturbed by startings and disagreeable dreams; heart palpitates on using any active exertion; pulsations regular. Dyspnœa occurs in paroxysms; health otherwise good. Cough of several years' duration, being present in the winter season only. This attack has continued from November last year; says he found Squill mixture of most advantage in his former attacks.

Ordered Compound Powder of Jalap at bedtime.

2d.—Chest examined today with considerable care: slight mucous rattle could be heard by the unassisted ear, and more distinctly by the stethoscope; percussion elicited the usual sound of the healthy chest. Some fulness in the epigastrium and right hypochondrium. Cough as yesterday; obscure sense of fulness at the left side, under the false ribs. Made him walk smartly through the room for some minutes, but no palpitation occurred. One costive stool from the powder.

Repeat the powder.

3d.—Last night had a severe fit of coughing, followed by smart pains through the chest and bowels; to relieve which, he insisted on his attendants procuring him an enema. After the injection, he had a call to stool: while rising, he fell into his nurse's arms, and expired.

5th. *Sectio cadaveris.*—Chest laid open: cartilages of the ribs almost entirely ossified. Lungs apparently healthy: on being cut into, they were found gorged with blood. Some white frothy mucus in the bronchiæ. A few tubercles, of the size of a pea, were found through the substance of the different lobes. The pericardium contained an ounce and a half of clear serum. The heart healthy every-where, except some round cartilaginous bodies, of about two lines in thickness, in the mitral valve. Spleen enlarged, and distended with fluid blood. Liver hard, pale, and extending across the epigastrium. Stomach and bowels sound; mucous surface of the stomach had a slight blush of redness.

Remarks.—As anticipated from the indications of the stethoscope, no enlarged tubercles or ulcerations of the lungs were found after death. We presume that the cartilaginous degeneration of the mitral valve was sufficient to account for the palpitation and disturbance during sleep. As Mathews had been for some years in the West Indies, and with our army in Egypt, it is probable that he there acquired the liver complaint, which he never mentioned during his life, he being particularly taciturn.

Query, were the granular bodies in the valves the cause of this man's death?

IX. VACCINIA.

The following are curious cases, forming exceptions to some of the best established laws of morbid phenomena.

Case I. June 7th.—Widow Aird, æt. forty, the mother of Charlotte Aird, at present ill of confluent small-pox, attended the

Dispensary five or six days since, and states that she sat for a few minutes beside a child who had been vaccinated seven days previously, and from whose arm matter was taken to vaccinate other children. She states, that on the following day she had severe rigors, nausea, lassitude, and pains of the back and head, which she attributed to the fatigue of attending on her daughter. This was the more probable as she had had the small-pox in her childhood. Three days ago, however, the pyrexia having abated, she observed a small pimple on the forearm of the left side, which put on the appearance of the vaccine vesicle. Today it shows all the appearances of this last, having the depression in the centre and the usual surrounding areola of inflammation. Two others have come out on the legs, of the same character: one, however, less distinct, the vesicle being torn and inflamed.

On the 11th, Catherine Aird, a child of three years, was attacked with chilliness and pains in the head and bowels. On the 12th, she was feverish, and vomited.

14th.—Symptoms were today alleviated by an emetic and cathartic.

15th.—A vaccine vesicle has made its appearance, having the depression in the centre, circular, filled with clear lymph, and with the surrounding erythema in a slight degree. This was first noticed by the mother on the afternoon of the 12th. On examining the body, another vesicle was found on the thigh, in a less advanced state, and a third on the cheek, not yet risen into a blister. Skin is now cool, and the head easy.

16th.—Last night the fever again came on, when several small pimples appeared, which show today all the marks of regular small-pox, rather as modified by vaccination.

17th.—Some of the pustules are filled with pus; they are pretty numerous on the face, arms, and breast. Fever again abated.

21st.—Pimples have reached the usual size, and are numerous on all parts of the body. No fever.

23d.—Pustules on the face have scabbed.

Remarks.—We have given the above cases as found in the Report-book, omitting the treatment and remarks; vouching for the correctness of the statements.*

X. PHTHISIS, WITH HEPATISED SPLEEN.

July 1st, 1827.—Jane Myres, æt. twenty-three, has been confined to her bed for the last eighteen months, but gives a very imperfect account of the origin of her complaint. When we saw her, six weeks since, for the first time, she laboured under cough, with purulent expectoration, diarrhœa, and irritability of stomach, rejecting most kinds of food; tongue pretty clean and moist; skin moist; had not been troubled with night sweats since the occurrence of the diarrhœa, which was particularly troublesome. Anodyne clysters moderated the looseness from that time till her death, two days since. Attention was principally directed to the stomach, which was so irritable at last that even the mildest ripe fruits were rejected. No pain was evinced on pressure, and the tongue was nearly in the natural state. All remedies tried for the relief of this symptom were only of temporary benefit, and no other nourishment was taken for the last fortnight of her life but what was contained in clysters made with arrow-root, in place of the starch in the anodyne injection.

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* These appear to us to be examples of the mild form of varioloid disease which sometimes arises from exposure to the contagion of small-pox; and, so far as they go, they tend to prove the identity of all those diseases.—E.

Appearances on dissection.—On opening the thorax, the pleura costalis and pulmonalis were connected by strong adhesions. A considerable quantity of coagulable lymph adhered to the surface of the lungs on the left side. On separating the strongest of these, we found, a little way in the substance of the middle lobe, an irregular cavity of about four inches, greatest length, lined by a firm fibrous membrane of considerable thickness. One or two small imposthumes were found in the right side.

The abdomen was then opened, when the parts presenting appeared healthy, excepting the spleen, which was enormously enlarged, and weighed four pounds. On being cut into, it presented the appearance of the sound liver, but considerably firmer; its vessels were enlarged, but no blood could be pressed from it. It occupied the whole of the left hypochondrium, and the stomach was found pressed nearly into the centre of the epigastrium.

XI. EXTRAVASATION ON THE BRAIN.

May 25th, 1827.—Margaret Pillendugh, æt. thirty-eight, of a sanguineous temperament, was passing through a narrow alley where a house was building, when a stone was supposed to have been thrown by the workmen from the top, which struck her on the crown of the head.

Half-past five P.M.—Found her in bed, in an insensible state, with a small wound on the scalp, crossing the sagittal suture at its back part, without any injury of the parietal bones. The wound had bled freely. After dressing it, the other symptoms were inquired into: the breathing was oppressed and stertorous, the pupil in a semi-contracted and fixed state; pulse sixty, oppressed; the jaws were locked, but could be separated a small way; the lower jaw drawn in under the upper. On the arms being pricked, she drew them under the bed-clothes; attempted once or twice to cough, seemingly to relieve herself from mucus in the trachea; and slight convulsive twitches occurred, during one of which the under lip was severely bit. The contents of the stomach were worked out from the mouth, frothing around the lips, and sometimes blown out with violence, but without separating the teeth; coldness in the lower extremities.

Brandy-and-water in small quantities till retching take place; and a stimulating injection immediately.

Ten P.M.—Injection brought off some solid fæces; urine passed in bed; insensibility still continues; pulse seventy-two, with some firmness. Was bled to twelve ounces, during which the pulse rose in frequency, but fell soon after.

26th, half-past ten A.M.—Coma continues. Much starting of the tendons, particularly of the left arm. Left corner of the mouth drawn upwards; pupils dilated; strong grinding of the teeth; snores loudly, with intervals of placid breathing; skin moist; pulse seventy-two, again somewhat firm.

V.S. ad ℥xij.

Eight P.M.—Blood cupped, first cup buffy; redness of the cheeks considerable; heat and moisture over the body; mouth not drawn up as in the morning; subsultus tendinum more frequent; no action in the wound.

Repeat the bleeding and enema. Keep the head wet.

27th, ten A.M.—Symptoms much as yesterday. Pulse eighty-four, firm and throbbing; flushing of the face gone. Blood to be abstracted from the temples or jugular vein, till the throbbing of the pulse is removed. Blood drawn in the morning cupped and buffy.

Eight P.M.—About eight ounces of blood was drawn from the temporal artery, when the pulse at the wrist suddenly sunk, so as to be scarcely felt. Bleeding was then discontinued, and the brandy-and-water given till the pulse returned. This was at three P.M. At the visit, the pulse was again eighty-four, bounding; the countenance flushed, with drops of perspiration on the face; breath free from stertor. Effusion beginning to take place into the bronchiæ.

28th.—Died this morning, at five o'clock.

Sectio cadaveris.—The usual incision from ear to ear being made, we proceeded to turn down the scalp, when we found under the posterior fold a large quantity of effused blood, more abundant on the right than on the left side of the brain, and greater as it approached the base of the skull. No fracture or fissure could be discovered in this stage of the dissection. Proceeding to remove the skull-cap, the whole of the posterior part of the dura mater was found covered with coagula, which were in greatest quantity on the right side. Under this membrane, on the surface of the cerebrum, blood was effused in considerable quantity. Brain and cerebellum removed; texture natural; lateral sinuses full of dark blood. A clot in the longitudinal sinus, anterior to its bifurcation, crossing the horizontal limb of the cruciform spine of the occipital bone. A fine fissure was discovered, forming two-thirds or more of a circle, which the saw (in removing the skull-cap) has completed. This was of the size of a large walnut, and from the lower boundary a crack extended down to the edge of the foramen magnum, but not through it. There was no depression, nor could it be pressed inwards, but yielded readily to pressure from within. No diseased appearance in the brain or its membranes.

XII. MELANOSIS.

June 31st, 1827.—James Cow, æt. six, had been long affected with mesenteric disease previous to his death, which took place two days since. The symptoms were entirely those peculiar to that disease. For the last twelve months, hectic sweats and diarrhœa alternated, and, for the last few weeks of his life, he suffered severely from sharp pains darting through his belly in different directions.

On opening the body, adhesions were found between the different folds of the intestines. Some of the mesenteric glands were as large as a nut, and hard. The peritoneum lining the abdominal muscles, and that covering the intestines, was studded over with small, raised, and black dots. They were found also upon the surface of the liver and stomach; broadest, however, upon the first-mentioned part, where the largest was nearly the size of a pea. None of these were found in the other cavities.

This child passed considerable quantities of black blood by stool and urine, for a few days before his death.

Aberdeen; 28th August, 1827.

PHAGEDENIC ULCERATION.

Cases of Phagedenic Ulceration. Treated by Mr. EARLE, at ST. BARTHOLOMEW'S HOSPITAL.

ELIZA MARSHALL, æt. twenty-nine, admitted into Patience' ward, under Mr. EARLE, November 16th.

This is the third time of her admission into the hospital for the same affection: the first was about two years ago, when she was speedily cured by the use of the strong Nitric Acid; and the same treatment was successfully repeated upon the breaking out of the wound last spring. Each-time the sore has occupied its present situation, which is on the left buttock, between the anus and the pudendum. She always enjoyed particularly good health, with these exceptions, never having been subject to any other venereal affection, except one small sore, some years ago, which was very soon healed, and is not aware that she ever took mercury.

About a fortnight ago she began to feel unwell, but nothing appeared till Sunday, November 12th, when she perceived a small lump on the old spot, which in a few hours burst into a wound, that has continued increasing to the present time, but there has been no running or sore. It is now about three inches in diameter, with irregular and jagged edges, having the dark, speckled, and dirty appearance characteristic of this peculiar form of venereal disease. There is a foul discharge, accompanied with much pain and considerable fetor. She has also a phagedenic ulceration, about the size of half-a-crown, on the left leg, which has existed two months. She complains of headache and thirst; bowels confined; pulse 110. The Nitric Acid was freely applied, after which she soon became much easier.

Dry lint to the wound.—Tinct. Opii ʒj. statim.—Mist. Salin. quartis horis.—Liq. Ant. Tart. m. xx. in sing. dos.—Fumigation to the leg.

17th.—The ulcerative process has stopped, and the constitutional irritation much abated.

Contr ut antea.

18th.—A black eschar fills up the wound, which has not, however, increased. General health improved. The wound in the leg looks better.

Lotio Opii cum Acid. Nit. bis indies.

19th.—Better. Eschar not yet come away.—Continue.

The patient had nearly recovered of the first ulcer, when, on the 7th of December, another one, of the same nature, broke out on the right labium, accompanied with great swelling of the neighbouring parts: it began with a small pimple, and in two days the sore was as large as a half-crown piece. The Nitric Acid was applied to it on the 9th instant, but the diseased process not having been arrested, the acid was reapplied the next day, with decided success. The sloughs came away, and the sore is now nearly healed. But, within the last week, the old sore has again fallen almost into its former condition. Her general health is apparently very good, and has been throughout; but there is a strange disposition to phagedenic ulceration, without ever having had any primary sore of that description, (at least as far as her statement can be credited;) showing the disease to be purely constitutional with her, which is, in fact, in direct opposition to CARMICHAEL's doctrine.

CASE II.—Sarah Mitcham, æt. eighteen, admitted into Patience' ward, under Mr. Earle, October 27th. She gives the following account of herself:—That, about five weeks since, several hard whitish bumps appeared on the pudendum, which were attended with an itching sensation and some heat when she was warm. She had previously much scalding in making water, but she did not observe any discharge till after these tumors appeared, when a very profuse one came on. She for some time neglected these symptoms; but, about a fortnight ago, a small pimple came out on the left side of the labium, which soon broke into a painful sore, it was not however till this had attained the size of a shilling that she applied to a surgeon, who gave her some black wash, which she used with much advantage till poverty obliged her to leave it off; upon which the sore immediately began to spread again. Since she discontinued the wash, she has applied nothing but bread and beer-ground poultice.

The sore is at present of a most formidable nature: it extends for nearly a hand's breadth on each side of the labia upon either thigh, and goes backwards on the buttock and perineum, having a dark brown and ragged appearance, with an intolerable fetor;

the edges are uneven, and violently inflamed; the labia are completely eroded, but the raphe of the perineum seems uninjured; there is a copious discharge from the vagina. The constitution is apparently but little affected: pulse 100, yet not full; bowels in good order, and no fever. The strong Nitric Acid was freely applied for some time, during which she suffered great agony. The surface was then dressed with dry lint.

Ol. Ricini ℥j.; Tinct. Opii gtt. L.

In about an hour she became perfectly easy, and went to sleep.

28th.—The phagedenic process has apparently stopped, except on the left side, to which the Nitric Acid was again applied.

Tinct. Opii gtt. xl.

The pain of this operation did not cease till evening, when she took Pulv. Ipecac. c. gr. x.

29th.—Better. The whole surface is now destroyed, and the edges clean. Sore to be washed with Sodæ Chlor. ʒij. Aquæ Oj. several times in the day. General health continues good.

30th.—Part of the eschar has come off with the dressing.

Quinin. Sulph. gr. ij.; Infus. Menthæ Sulph. ℥j. fiat haust. bis die sumend.—Wound dressed with Lotio Opii ℥j.; Acid. Nit. gtt. iij.

31st.—Much the same.

Edges smeared with Ung. Cetacei et Cerat. Res. Flav. āā ℥j.—Lotion as before.

November 1st.—The eschar is entirely removed, and the sore looks clean and well.

5th.—Granulations are sprouting fast, and the edges are skinning over. The vaginal discharge has much diminished, and great care is taken to keep the parts clean.

10th.—Rapidly improving; the wound is much contracted.

Cont^{r} ut antea.

15th.—She is getting fast well; the wound is very much diminished.

She left the hospital cured, soon after.

Case III.—Mary Ann Godfrey, æt. twenty-two, admitted into Patience' ward, under Mr. Earle, November 16th. States that, about a fortnight ago, the labia on both sides began to swell to a considerable size, but there was neither running nor sore. In the course of two or three days, a small pimple appeared on the left labium, which quickly became a sore, increasing in size till her admission, but for which she had done nothing. Her general health has always been very good; she has lived in an open and airy situation for some time.

The sore has now destroyed the left labium almost entirely, and is fast encroaching on the opposite one. The clitoris appears to be included in the ulcer, which reaches downwards to the fourchette. The surface is deep and irregular, covered with foul sloughs, and the margin is red and inflamed. She suffers much pain, and her constitution is greatly disordered; tongue foul; pulse 115; bowels confined; skin hot and dry; and she has much thirst.

Applic^r Acid. Nit. fort, et postea Tinct. Opii m. xl. Pulv. Ipecac. comp. gr. x. h. s. Dry lint to the wound.

17th.—Somewhat better today, but the sloughing is not quite stopped at the upper part of the wound, which is in other respects much the same; bowels freely opened.

Repet^r Acid. Nit. fort. et postea Tinct. Opii m. xxx. Pulv. Ipecac. comp. h. s.

18th.—The sloughing still continues in the upper part of the wound, and there is much pain in the part; pulse 100, and full; tongue furred.

Applic^r Cucurbit. Cruent. ad ℥xij. lumbis.—Continue dry lint to the wound.

19th.—Much the same.

The Protonitrate of Mercury to be applied.

Two days after the application of the Protonitrate, the sloughs came off, leaving a healthy granulating surface, which has been gradually healing since, without further interruption; and she soon left the hospital perfectly cured.

Although the improvement in this case seems chiefly to be attributed to the nitrate of mercury, it is questionable whether it did not depend as much on the strength of the nitric acid forming the protonitrate being greater than that of the pure acid which had been previously applied; for there is certainly great variety in this article, at least as it is manufactured in this hospital.

PARAPLEGIA.

Case of Paraplegia. By Charles Thomas, M.D. Devonport.

John Shapcot, at the time of his death forty-three years of age, (twenty-two of which had been spent in the navy,) tall, robust, and well proportioned; till his last illness recollected no interruption to the full enjoyment of health, except an attack of fever in India fifteen years since, and of rheumatism, which, in the winter of 1824-5, confined him to the house four months.

The circumstances of the case, as they occurred before I visited him, I have obtained from the patient himself, his wife, and a respectable surgeon, under whose care he was placed.

Towards the end of last March, after sleeping several nights in a very damp room, the first symptom which attracted his attention was a pain of the left side, sometimes extending across the lower part of the back. In a day or two, increasing weakness of the legs was felt, and some degree of numbness. The bowels became constipated, and a difficulty in voiding his urine was perceived. This last symptom soon amounted to complete retention; and not till it had existed for four days was any professional assistance sought. There had been no sort of complaint of the head.

The treatment during the month of April consisted chiefly in regularly relieving the bladder by the catheter, and the constipation by frequent enemas, and occasional moderately active purgatives. The spine was also frequently rubbed with a powerful stimulating liniment. In the course of three weeks, the numbness and weakness of the legs had nearly left him; the urine could be expelled so well by a voluntary effort that the use of the catheter seemed no longer necessary; and a regular state of the bowels was in a great degree restored. But these promising appearances were of short duration. By the beginning of May the symptoms returned more intensely than ever; and on the 5th of that month, when he became a patient of the Devonport Dispensary, he was completely paraplegic. From the lower lumbar vertebræ to the toes, there was an entire abolition of sensation and motion. Severe pricking and pinching of the skin made no impression whatever. The vesical and intestinal excretions were wholly suspended. There was no complaint of the head; nor, indeed, pain any where, but a state of general uneasiness, and almost total deprivation of sleep. Appetite continued good, as it had been from the commencement of the attack. For upwards of a week the treatment was similar to that before described, with the addition of repeated and extensive blistering along the spine, and the administration of an opiate every second or third night. From the latter, through all the subsequent stages of his illness, he never failed to derive great refreshment.

On the 14th of May, extensive redness began to show itself on the sacrum. By the 20th, the integument sloughed, leaving a circular ulcerated surface, five inches in diameter. He now felt weaker, with some failure of appetite. Sulphate of Quina was prescribed, to which, in a few days, Carbonate of Ammonia was added, at the recommendation of my colleague, Dr. MAGRATH.

June 1st.—The ulcer had never spread beyond its original dimensions, or assumed any other than a favorable aspect. Indeed, it now began to cicatrise about the edges. There was also an evident amendment in the disease. He could raise his legs a little in the bed, and perceive some feeling in them.

10th.—This encouraging change had gone on daily improving. Motion and sensation were so far restored that, with slight assistance, he could bear his legs on the floor. The catheter was still used, but he could make a small quantity of urine several times in the day without it. For some time a great deal of mucus had been discharged with the urine, and now a considerable quantity of pus was discovered. But there had been no pain in the bladder since the period of first employing the catheter.

17th.—This morning the poor patient told me, as soon as I entered the room, that the urine had suddenly come away during the night by the rectum. This occurrence, though not altogether unexpected, created in my mind no little regret; for the paraplegia might then be said to be entirely gone.

Under this condition of diseased bladder he continued to linger till the time of his death, which happened on the 21st of July.

It was a source of great disappointment to me, that a case of so much interest could not be further elucidated by an examination after death. But his widow was inflexible in her opposition to it. Still, without this evidence, it affords us enough of a different kind, from which several important inferences may be deduced. It goes far, though the evidence upon which it rests is but negative, to confirm the admirable observations of Dr. BURDER, in the Journal for May, where a pathology of paraplegia, though supported by the venerable name of BAILLIE, and adopted by a large portion of the profession, is called in question with so much research, candour, and sound reasoning, as to reflect a high degree of credit on the author.

In the present instance, through the whole course of the disease, *not a single uneasy sensation was felt in the head,* as the patient unequivocally declared, when repeatedly interrogated on that point, while he distinctly stated that pain of the *back* was frequent, and sometimes severe.

Another and a more remarkable incident, is the coincidence between the existence of an extensive ulceration on the sacrum and lower lumbar vertebræ, and the gradual disappearance of all the paraplegic symptoms. Have we not here a strong presumption, not only of the spinal marrow being the seat of the disease, but also the important practical fact that we are often satisfied with issues occupying a space too limited to give them a due degree of efficiency?

The diseased condition of the bladder, and the causes of it, in this and similar cases, form a curious subject of pathological investigation. The extremely distended state of this viscus for four days before any professional relief was sought might have induced an ulcerative process in its coats, which ultimately led to their disruption. Or are we to suppose that, the nervous power of the part being lost, the urine became decomposed, and continued to act as an irritant on the mucous surface to the entire disorganization of the bladder, in accordance with what I believe has been observed in experiments made on animals?

Dr. Burder, after quoting a passage from a letter he had received last December, makes this remark:—"Thus, the powerful authority of Dr. Abercrombie cannot, with any propriety, be now advanced as confirming the cerebral origin of paraplegia." Nor could it before have been so, if we look to the tenor of his valuable observations on this subject; for whatever importance may have been affixed to the four cases adduced as proof of such an opinion being entertained by that distinguished pathologist, yet he expressly says, "Paraplegia *generally* depends upon disease in the spine. It is sometimes, however, produced by affections of the head, as indurations of the cerebellum, or tumors about the medulla oblongata."*

I cannot conclude this communication without adverting to another case, very analogous to what I have related, and which leads to the same deductions respecting the proximate cause of paraplegia. A gentleman in this county sunk under that disease, after lingering a year. During the course of it there was severe and almost constant pain of the back, but none in the head. After death, the brain exhibited no traces whatever of diseased structure: the spinal cord was not examined.

Devonport; Oct. 15, 1827.

CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus.*—PERSIUS.

An Introduction to the Comparative Anatomy of Animals; compiled with constant reference to Physiology, and illucidated by twenty Copper-plates. By C. G. CARUS, Med. et Phil. Doct. Professor of Midwifery to the Medico-Chirurgical Academy at Dresden; Director of the Royal Saxon Obstetrical Institution at the same place; and Associate of various learned Societies. Translated from the German, by R. T. GORE, Member of the Royal College of Surgeons in London. In two Volumes.—8vo. Longman and Co. London, 1827.

IT is not our usual custom to analyse works of an elementary nature, such as the one before us; but when we consider how much less the study of comparative anatomy occupies the attention of the student in this country than it ought to do, we think we shall confer a favor on our readers by laying before them a sketch of the work of CARUS, such as we hope will induce them to turn to the original for further information.

The structures first considered are those belonging to animal life: the Zoophyta, as lowest in the scale, are those with which the volume commences. The author combats the idea that the different elementary functions must necessarily be distributed among distinct structures. When, says he, we find that there may be respiration without lungs,—nutrition, growth, and secretion without a circulation of fluids,—generation without distinct sexes, why should we doubt that sensitive life may exist without nerves, or motion without muscular fibres?

The investigation of the anatomical composition of zoophytes has not hitherto discovered, in the lower orders of creation, any thing more than an uniform gelatinous mass; and yet when we observe that the sensibility of these animals, simple in construction as they are, is of great acuteness,—that some of the marine polypi have been ascertained always to turn towards the light, while others display an aversion to it; —when also we perceive that the lower orders of zoophytes possess the power of motion in a high degree,—we cannot, according to M. Carus, hesitate in considering this uniform gelatinous mass as the primitive animal structure, which, in the same manner as it furnishes the groundwork for more perfect textures in the embryo of the higher classes of animals, is here destined for the exercise not only of the various animal, but likewise of the vegetable functions. This view would enable us to explain the extraordinary power of reproduction enjoyed by these animals, by means of which parts are so readily replaced, or even converted into new beings.

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* Edinburgh Medical Journal, January 1819.

The uniformity of structure, however, in these animals leaves but little room for anatomical description. Even locomotion, so characteristic of volition, seems, in many of these animals, to be of a passive nature. The Medusæ, being nearly of the same specific gravity as the water they inhabit, are moved by the waves and currents; while some (the Holothuria physalis) appear to sail. Some are capable of performing a progressive motion by fixing the head and tail alternately; others present the appearance of attraction and repulsion, as in electrical action, and yet others (corals and sponges) are wholly incapable of locomotion.

In the movements proper to the body, there is a remarkable coincidence with those of plants; the arms of the polypes retracting towards the centre when stimulated, as the stamina of some flowers towards the stigma; and the polypiform organs, called by our author the "animal blossoms," of the Gorgoniæ, and others, fold themselves up, just in the same manner as the leaves of the Mimosa.

The Infusoria are little more than cells partially filled with lymph, and the innumerable variations of form they assume may easily be accounted for by the different degrees and extent to which the fluid is collected at one or other point of their bodies. In the polypes the arms are entirely composed of tubes communicating with the body, and containing fluid. The body contracting, forces the fluid into them, producing their elongation; while the tube contracting, returns the fluid, and the arm is again retracted.

The organs destined for the sensitive functions seem to be the arms, and other projections with which they are furnished. These organs, however, serve other purposes, particularly prehension and motion.

In those animals of this class which are possessed of a skeleton, it either forms an insensible stalk around which the elementary animal substance is fixed, or the latter is included within the former: with respect, however, to the solid parts, they differ essentially from bone being either of a horny texture, or almost wholly composed of carbonate of lime.

There are some other genera of zoophytes, which, by the greater perfection of their organization, appear to form a transition to the other classes of animals. In these, nervous and muscular fibres are discernible. The nervous matter first presents itself as a *peripheral* layer round the common central cavity, which is at once a stomach, heart, and sexual organ. From this central mass nervous filaments are sent to supply the different parts, and the organs of motion are, under such circumstances, more perfectly developed.

The organs of the animal functions in the Mollusca and Articulata next come under consideration. The distinction between the fibrous and ganglionic portions of the nervous system is particularly well marked in animals possessing neither brain nor spinal marrow; and the ganglia in some of them are further remarkable for their colour. Thus, in the Helix *stagnalis* and *cornea* they are bright red; in the Aphysiæ, blackish red; and in the common fresh-water Muscle, they are bright yellow. As to the form of the nervous system, the circle round the œsophagus, which appeared in the preceding class, constitutes in these two its most uniform and essential part. This nervous ring either receives additions to its bulk by the formation of larger ganglia in its substance, which gradually approximate at the upper part of the animal, or the nervous rings are multiplied, surrounding the alimentary canal.

In some of the Mollusca, the form of the nervous system approximates to the type of the higher classes of animals; and in the Cephalopoda we find the rudiments of a true skeleton, though as yet only in the shape of cartilage. The purpose, however, of protecting the more important parts is distinctly attempted. The simplest form presents itself as a cartilaginous ring, which receives the nervous circle and the cerebral ganglion in a grooved depression on its internal surface, and at the same time permits the passage of the œsophagus through its centre: the cartilage, too, is perforated in various parts for the transmission of nerves. In the common Sepia (*officinalis*), under the cartilaginous ring there is also a dorsal plate of the same material, placed anteriorly, from which the arms proceed. This, however, as well as the dorsal bone (*os sepium*), is more immediately connected with the organs of motion than those of sensation.

Of the Articulata, we find that among some of the vermes (as intestinal worms, hydatids, and tæniæ,) the transition to the class of zoophytes is so complete, that no nervous system, distinct from the mass of the body, can be traced. In others, however, (as the leech and the common earth-worm,) a chain of ganglia is very distinct: in the latter, the nervous cord approximates to the form of the spinal marrow in the higher orders of animals.

In the Crustacea, another step is gained in the more perfect formation of the individual ganglia, and in the appearance of proper nerves of sense.

In Insects, infinitely diversified as they are, the ganglionic chain still remains the most important part of the nervous system: the ganglia, however, are fewer in number, and proportionably larger; and it is a most curious fact that the more elevated organization of this kind generally presents only as the ultimate result of various metamorphoses, so that the larvæ have a nervous system corresponding to that of the vermes, while, in the fully developed insect, it is more perfectly formed.

Organs of Sense.

When the nervous system is once decidedly distinguished from the general mass of the body, its relation to the external world becomes mediate: it is influenced by impressions through the intervention of the organs of sense, and acts upon the external world by means of its organs of motion. To complete this connexion with external objects, different senses are required, but these are only developed gradually, and from the first and most simple sense,—viz. that of feeling. There are two principal surfaces, a dermoid and an intestinal, and it is inferred that there are two corresponding kinds of feeling. Each of these constitutes, as it were, the primordium whence more perfect senses are ultimately developed: thus, from the intestinal sense is derived the sense of taste, by the addition of peculiar organs at the cephalic extremity of the intestine; while from the dermoid sense is derived that of touch. A yet higher order of senses are those destined "for the reception of the most important and most general relations of the individual organism." Sight and hearing are here alluded to as conveying to the mind ideas of totality and individuality.

The remarks of our author are here confined to the organ of touch, smell, sight, and hearing, inasmuch as he looks upon the consideration of taste and sexual feeling as inseparable from that of the digestive and sexual organs in general.

Touch and smell are ranked together under the head of dermoid sense. In the Mollusca these senses are but imperfectly developed; nor are they in a state of much perfection in the Articulata. The antennæ of insects seem to be frequently organs of smell as well as of touch.

Hearing may be divided into that extent of sensation which merely judges between differences in the strength of sound, and that which appreciates its quality; and it is probable that in most invertebral animals there is either no sense of hearing at all, or only one by which the strength of the vibrations propagating the sound can be perceived. Of the Mollusca, distinct organs of hearing have been found in the Cephalopoda alone. We mentioned that in these the first rudiments of a skeleton appeared. In the anterior part of their ring-shaped cartilage is a tubercle without any external aperture, but having depressions for two small membranous bags placed close together, and on which the auditory nerves are distributed: each bag contains a portion of fluid and a solid body. This appears to be the simplest form of the labyrinth, which, in its full development in the human species, constitutes the most important part of the organ of hearing.

In the Crustacea, the organs of hearing can be traced; but in many insects which hear most acutely, and which themselves emit sounds, (as the grasshopper,) no such organs have been discovered.

The first appearance of sight is observed in the Gasteropoda, where the function is combined with that of touch, as in some genera (Clio, Scyllæa, and Lernæa,) there are two little black points, sometimes situated at the extremity, sometimes at the middle, and sometimes at the base of the tentacula, presenting internally the most essential parts of an eye. In some these minute eyes are placed at the point of the feelers, and admit of being retracted and protruded according to circumstances. In the Cephalopoda, the eyes are of more considerable size, and have muscles attached to them: they want both the cornea and aqueous humor, but the vitreous humor is present, and the structure of the eye must be regarded as well developed. In the Articulata, the eye is less perfect.

In concluding this part of the subject, the author makes the following remarks:

"So far of the organs of sense of invertebral animals, the review of which unavoidably suggests various questions to the observer of nature. For example: Do these animals, like man in his ordinary state, feel by individual organs?—are they not rather, on account of their less complete individuality, as displayed in the want of centrality in their nervous system, to be viewed as integral parts of the system of the universe?—are they not, for the same reason, like somnambulists, organs of sense throughout?—must they not, on the same account, receive impressions from the slightest changes in the external world, although, from the deficiency of distinct consciousness, their sensibility is so imperfect that they are unable clearly to perceive or estimate them?—and lastly, is it possible, without admitting such ideas, to give any satisfactory explanation of their prescience of weather, of their wonderful instincts, of the habits of insects, and of all those singular phenomena which excite the curiosity and astonishment of all who witness them? It is to be wished that general physiology may yet, if possible, solve these inquiries." (Vol. i. p. 89.)

Organs of Motion.

When solid bony structures are met with in the animal frame, a close connexion always exists between them and the organs of motion, although they are more immediately destined to protect the important parts of the nervous system. In the Mollusca, the muscles constituting the active organs of motion have uniformly a gelatinous appearance, and are remarkably distinguished from the firmer muscular fibres of the superior animals. In the Acephala, which have shells, these are moved by powerful muscles and ligaments, distinct from the muscular organs of locomotion, the motions of the shell being connected with respiration rather than change of place. The most remarkable organ connected with the muscular system is an expansion which surrounds the whole body: in some this assumes a more perfect development, and is called the cloak. The opening of the shell is effected by a fibrous ligament at the hinge, the elasticity of which makes them gape; and, as an antagonist to this, there is generally a short strong muscle at the anterior and posterior parts of the shell, attached to both of them, and which serves to bring them together. In several of the Acephala, there is an organ called the foot, which effects locomotion and various other purposes. It is a fleshy mass, which can be projected and retracted, and which in some genera (Mytilus, Pinna, Aurcula,) has at its base the excretory duct of a gland, pouring out a tenaceous mucus, which the animal draws into threads, and thus attaches itself to the rocks.

In the Gasteropoda, which have no shells, the most important muscular organ is an external membrane, forming a bed in which the viscera are contained. Strong fibres cross each other in all directions, particularly over the abdomen, on which the animal crawls; and hence the name (Gasteropoda) given to this order. Mucus is copiously secreted from this part, by means of which the animal fixes itself, as well as by attaching the edges, and then retracting the central parts, so as to produce a tendency to a vacuum.

In Snails with shells there is a similar mechanism, but with a fissure on the dorsal side of the membrane, through which nearly all the viscera protrude (as in a hernial sac) into the shell. The foot is attached by muscles to the shell, by which the animal can retract itself within it. The forms of the shell in the Gasteropoda are exceedingly various, but it is remarkable that they almost all observe a uniformity with respect to the spiral turns, which are scarcely ever to the left side.

In the Cephalopoda there is a fleshy coat, but it appears to serve chiefly for the purposes of respiration, while the arms fixed round the head are the organs of locomotion. These arms are very various in shape and number; they are fixed round the head, (hence the name Cephalopoda,) are provided with suckers, and have a remarkable power of reproduction. In the Articulata there is no trace of any internal solid support to the moving powers, though there is occasionally an external case, or shell; and in some instances this is articulated, forming, as it were, an external moveable skeleton. The muscular fibres are more developed in this than in the preceding class: indeed, the muscular power in insects is very great in proportion to the size of the body,—greater than in any other instance; a circumstance connected with the perfection of the respiratory function in these animals. Locomotion is performed in the Crustacea by means of tolerably firm muscles, which are placed within the bony cylinders constituting the skeleton, which, as in the crab, for example, is external. The entire leg in these presents a prototype of the leg of the quadruped, the situation of the hard and soft parts being reversed. A remarkable circumstance connected with these is the facility with which these limbs are detached: thus, it is said that the lobster, when alarmed, can detach them by a voluntary effort.

The structure of the legs in Insects corresponds pretty closely with that of crabs, each phalanx forming a hollow tube, which contains the one beyond it. The wings of insects deserve particular attention. According to OKEN, they are "detached bivalve shells, and hence their position on the back: the elytra represent the shells, and under them are the laminæ of the gills; the wing coverings are opercula." The wings are attached to the pectus, and moved by muscles placed within it, the veins of the wings apparently serving the office of tendons. It has already been mentioned, in speaking of the nervous system in insects, that, during their larva state, this descended in the scale approximating to the formation of the vermes. The same holds good with respect to their organs of locomotion. They have generally a layer of muscular fibres under the external covering; and to such extraordinary minuteness has the investigation of these objects been carried by some, that LYONNET has reckoned 4061 muscles in the caterpillar found on the willow.

Second Formation of Organs belonging to the Animal Sphere.

This part of the work describes the further development of the nervous, sensorial, and locomotive systems in animals with vertebræ; and, as the osseous frame is equally connected both with the nervous and muscular functions, so the skeleton now comes to occupy a principal share of attention, and its peculiarities are described in Fishes, the Amphibia, Birds, and Mammalia. Into this part of the work it is impossible for us to follow our author, and we must content ourselves with a few very general observations.

In all animals having a brain and spinal marrow, the fundamental form of the osseous frame is originally determined by the peculiar form of the nervous system. This consists of a single central mass extended along the back, and composed of a series of distinot portions, each of which, like the cerebral ganglions of one of the Sepiæ, is indicated by its giving off nerves; and it is a striking coincidence with such a disposition, that the principal portion of the skeleton is formed of a series of bony rings, which, being articulated so as to form a closed cavity, compose the cranial and vertebral column, the distinctive character of the second division of the animal kingdom. As the central nervous mass is separable into two great divisions, the brain and spinal cord, the former being distinguished by a higher degree of development; so also in the vertebral column, we may distinguish between the cranium and the spine; the former being, as it were, the ultimate development of the latter.

It is the object of M. Carus, in the descriptions which follow, to elucidate, by a series of animal forms, the nature and manner of this development,—the gradually increasing distinctness in the separation of the cranium from the spine, and the progressive advances in the formation of extremities, —to show, in a word, how, "at every step we take, the invariable uniformity of the productions of nature to fixed laws is evinced by proofs of every description."

With regard to the formation of bone, it is remarkable that, as the first indication of an internal skeleton consist of cartilage, (the cartilaginous ring of the Sepiæ, already described,) so also, in the higher animals, the rudiments of the skeleton is composed of the same material, and, while bone is formed by depositions of successive layers from secreting surfaces, so the earthy shells of the Molluscæ are formed by secreting membranes; with this difference, however, that in the higher animals the bone consists of phosphate of lime, and continues to be nourished, whereas in the other case the shell is composed of carbonate of lime, and is not changed after its first formation.

Referring to the work itself for a minute account of the skeletons of the various tribes of animals, we now resume our sketch of the volume, at that part where M. Carus proceeds to trace the development of the nervous system in the higher classes of animals.

Turning for a moment to the forms of organization of which we have already spoken, it will be remembered that the Articulata have, in accordance with the jointed structure of the whole body, an articulated nervous system—the ganglionic chain. The articulation of the body, i. e. its division into segments, still continues in the higher classes, where it is most distinctly marked in the spinal column. In the vertebrated animals, the central masses are consolidated so as to form a single and continuous cord; a change, however, of which we have some examples in the Vermes, Crustacea, and larvæ of insects. It is owing to this consolidation that the individual sections of the ganglionic chains in the spinal marrow are only to be distinguished by the pairs of nerves which they send off; but, when a more perfect evolution of the individual portions take place, as in the brain, the evidence of the existence of separate masses is no longer doubtful. From the brain uniformly proceed the nerves of hearing, sight, and smell, and consequently the number of its principal divisions is always fixed at three. Thus, one principal division may be proved as the ganglion of the olfactory nerve; the second, as the ganglion of the optic nerve; the third, as the ganglion of the nerves of hearing, smell, touch, and motion, (the latter two through the medium of the spinal marrow.) But in the higher classes of animals there is a peculiar nervous system for the vegetative functions, and which forms a perfect repetition of the nervous system of the inferior classes, both by surrounding the alimentary canal and vascular system, and also by presenting the type of a chain of ganglia.

In fishes, the brain and spinal cord maintain nearly equal rank; for, although the former has the preponderance in point of structure, yet the latter always has the superiority as regards bulk: indeed, it stretches through the whole extent of the vertebral column, even through the caudal vertebræ, which is not the case in the superior animals. The form of the spinal cord very closely resembles that of man: its nerves rise by superior and inferior roots, and it is only on the latter that ganglia are found. The brain in these animals is little else than a series of pairs of ganglia, ranged on the upper side of the medullary cord: its size is very inconsiderable. In some species of shark, the anterior mass consists of a single large ganglion, whence proceed the olfactory nerves, and which is remarkable as containing a cavity corresponding to the two lateral ventricles of the human brain; and these are invariably present in the succeeding classes. With few exceptions, the optic nerves cross without decussating, but they are connected by a commissure at their origin. In the third cerebral mass, there is a single ganglion, principally composed of grey substance, which may be considered as the prototype of the cerebellum; and, in the cartilaginous fishes, it corresponds in structure to that of the human subject.

In the Amphibia, the great divisions of the nervous mass are still nearly similar; for, although the brain is more developed than in fishes, yet the spinal marrow preponderates in point of size. The nerves are essentially distributed as they are in man; those only being absent which correspond to organs which do not exist.

In Birds with organs, viz. the brain and spinal marrow are developed in a higher degree than in any of the preceding. The brain has acquired a greater breadth and more rounded form, and now preponderates in point of bulk. The three primary divisions of the brain are no longer placed one behind the other, as in the preceding classes, but seem rather situated below each other. The optic nerves are generally very large; in this respect only to be equalled by those of the lizard, and form a perfect decussation.

In the Mammalia, the spinal marrow no longer admits of comparison to the brain with regard to size; nor to the same part in birds, as respects the perfect development of particular parts: in fact, the spinal marrow now becomes gradually more and more subordinate to the brain. The spinal cord, too, is in general much more similar to that of man than in the preceding classes. Of the individual masses composing the cerebrum, we may mention that the corpus callosum and fornix now present themselves in a well-developed condition, and the cerebellum receives a notable increase of size, and the spinal and cerebral nerves have a distribution in all essential circumstances similar to that in man.

One great object of our author throughout is to establish what he calls the " absolute centricity" of the nervous system in man; and he concludes this division of his work with the following pertinent remarks:

" In my Essay on the Nervous System, I have already claimed attention to the evident appearance of this principle of centricity in the history of the formation of the nervous system; nor will any unprejudiced person refuse to admit the manifestation of that law, if he carefully compare the various forms of that system, from the circular collar around the œsophagus in the lowest classes up to the human brain, preponderating alike over nerves and spinal marrow. This is not the place to examine the advantages accruing to physiology from the knowledge of that law; it appears, however, worth while to inquire whether the investigation of the nature of the mental faculties may not be promoted at least as much by such anatomical comparisons as by the performance of rude experiments on the brain of living animals? and which process of the two is really most suited to the nature of the object?

"The opinion advanced in that Essay, that the contemplation of the nervous system, as recognised by our external senses, is, as it were, the assignment of a locality in the organism for the intellectual faculties; and, on the contrary, the mind, as recognised by our internal senses, the nervous action viewing itself intuitively: —that opinion, I say, will not be refuted by quoting, in opposition to it, the anthropomorphous form of the brain of apes, which want the intellectual faculties of man. We must invariably examine the nervous system, not in an isolated matter, but with reference to the whole body; recollecting that it presents itself as the primary and most important structure regulating the general formation of the body, and, consequently, that the superiority of its rank is expressed, not merely by its individual formation, but also by that of the organism collectively. Consequently, even admitting, what is by no means the fact, that the brain is alike in man and apes, the latter must still rank below the former in a degree corresponding to the superiority of the general form of man. Neither must it be forgotten that this view of the result of the comparison of the simultaneous development of intellect and of the nervous structures is not by any means incompatible with the higher principle which forms the basis as well of the manifestations of the intellectual powers as of those of the nervous system: we have here to consider only what is perceptible by our senses, which, however, we must not confound with the principle itself. It is immaterial whether the object belong to the internal or external senses: in either case, it is still but an object of sense; but nothing can be more certain than that the ideas of sense, in the varied combinations of which our intellect consists, are, to the full, as much as corporeal subjects themselves, the mere perishable covering of the latent divine spark within.

"As to the observations which are intended to prove the permanence of this primary nervous power, independent of organic locality, they are totally inadequate for the purpose: an important injury is very far from amounting to absolute destruction: the permanence of sensorial manifestations, and of nervous action in general, after complete annihilation of the nervous system, would alone be decisive." (Vol. i. p. 275.)

Organs of Sense.

Touch.—In the vertebrated animals, as in those without vertebræ, the general surface is in many instances an universal organ of touch, while distinct parts devoted to that purpose are wanting: nay, in many species of the higher animals, this sense is either entirely wanting, or exists in a very imperfect degree. In Fishes and the Amphibia, the animal, in general, touches with the mouth alone; and in Birds the bill appears the only part where this sense is developed. Among the Mammalia, the palmata coincide in this respect with fishes; most animals having hoofs or claws with the amphibia, and bats with birds. It is remarkable that in the mole, shrew, pig, and elephant, the senses of touch and smell are combined in one organ, as in the inferior animals.

Smell.—M. Carus is of opinion that, as a true sense of smell can only be exercised in aeriform media, so it must necessarily be absent in those which do not respire air,—i. e. in fishes. It appears, however, that these animals are able to discover very slight changes of the fluid in which they are placed, (rapacious fishes, for instance, discover a carcase at a distance;) but this is attributed to a sense something mediate between taste and smell, and which our author calls *scent.* The general sense of smell, and that peculiar modification of it which is here called scent, have this in common with touch, that a certain degree of motion is essential to both kinds of sensation. There is little to remark with regard to smell in fishes, the amphibia, and birds. According to Scarpa, the sense is stronger in males of the last class than in females. In the mammalia, the organs acquire great additional development, and in many species have a distinct relation to the sexual system.

Hearing.—The organ of hearing in fishes is placed within the same cavity as the brain, and the little sac which we saw existed in the Mollusca is here accompanied by three semilunar canals, nearly resembling those of the human ear. In the Amphibia, the organs, originally within the cranium, are gradually more developed outwards, but in very different degrees. In Birds, the organs of hearing become more perfect; there is the rudiment of a cochlea, and the nerves are disposed essentially as in man. The Mammalia are distinguished, with regard to the organs of hearing, by the development of a true cochlea, by the multiplication of the auditory bones, and by an external ear. As to the peculiarities of these organs in man, it would appear that they are less calculated to receive delicate impressions than in the mammalia. Among the points of superiority in the latter, may be mentioned the size and mobility of the external ear in several species, the extent of the tympanum, the superior strength of the ossicula auditus, and the greater size of the auditory nerve, as compared to the size of the brain. But it is probable that the organization of the human ear is such as to adapt it for distinguishing varieties in sound to a greater extent than is possessed by any other animal. We thus perceive that in Fishes there is little more than the membranous labyrinth; in Amphibia and Birds, the tympanum is added, and the auditory bone of the fenestra ovalis is first found, whilst there is a commencement of an external auditory canal; and, in the crocodile and owl, even some traces of an external ear. In the Mammalia, the labyrinth is still more completely developed, and the tympanum still more completely separated from the articulation of the jaws, the bone of which, in birds and several amphibia, contribute to its formation.

Sight.—In Fishes and the Amphibia, the common integument is continued over the eye, and sometimes so little changed that the organ is completely hid by it, and must consequently be nearly insensible to light; the iris is but little moveable; and the ciliary processes are imperfectly developed. The size of the eye is considerable as compared to the brain, its position is generally lateral, and the orbit is for the most part incomplete. In the frog, the eyes project into the cavity of the mouth, and the animal has the power, by the action of a peculiar muscle, of concealing the eye by depressing it into the mouth. In the viper, the conjunctiva is so completely a prolongation of the common integument, that it is thrown off at the same time with it.

In Birds, the eye bears a remarkable proportion in point of size to the brain and to the head; a circumstance in which the organ here presents an analogy to that of insects. The conjunctiva and common integuments are entirely distinct in this class, and there are invariably three completely formed eyelids. The third eyelid, or membrana nictitans, is the most remarkable; it projects horizontally from the anterior angle of the eye, and is moved by a peculiar mechanism. It has attached to it a strong slender tendon, which passes round the eyeball, is braced away from the optic nerve by a small muscle, and ultimately terminates in a small pyramidal muscle, which, with the one above mentioned, is attached to the sclerotica, and serves to draw the membrana nictitans forwards. The sclerotica is very firm and elastic, consisting of three laminæ, between the outer and middle of which the osseous circle is inserted. This consists of from fifteen to seventeen laminæ of bone, forming in some cases a smooth circle, and in others a prominent cylinder. The cornea is generally very convex: in some birds (as the owl) a circle of muscular fibres has been discovered attached to its inner lamina, by which it becomes capable of being drawn inwards, nearly in the same manner as the fibres of the diaphragm depress its tendinous centre.

The peculiar characteristic of the eye in Birds is the pecten or marsupium. The optic nerve passes obliquely through the sclerotica, and expands to form the retina: immediately before the entrance of the nerve into the sclerotica, its laminated texture is in many places very conspicuous, when the eye has lain some time in alcohol: the central vessels pass into the eye between the laminæ, and they then unite into a blackish and nearly quadrangular membrane, arranged in beautiful folds, which, extending through the vitreous humor towards the capsule of the lens, form the marsupium.

In the Mammalia, the size of the eye is small relatively to the head, but it is more completely mobile than in the preceding classes: the lachrymal apparatus is more perfectly formed; and it ultimately presents itself in man as the most elevated organ of sense.

Electrical Organs.

Intermediate between the organs of sense and those of motion may be ranked those which exert at will an influence, "partly nervous and partly electric," on external living objects. It is in fishes only that this power is manifested to any considerable extent,—viz. in the electric ray (Raya torpedo), the electric eel (Gymnotus electricus), and the Silurus electricus. Electric actions have likewise been observed in the Tetrodon electricus and the Trichiurus indicus. The structure of the organ in the three first is extremely like the common muscular fibre of fishes; it presents numerous strata, formed by tendinous partitions, filled with a whitish gelatinous fluid. Many nerves are distributed on these cells, and it is probable that the nervous power accumulates in these, and can be voluntarily discharged. In the higher classes of animals, the only things which can be at all compared with this phenomenon, are the electric light of the eyes and the electricity of the skin in cats. M. Carus is also of opinion that "in man the magnetic influence may be considered as a similar, though refined and modified appearance." We believe, however, that, on this side of the Channel, the magnetic influence is so much "refined" as to escape cognizance altogether.

A short account of the Organs of Motion terminates the volume; but these are not of a nature to interest our readers.

A Manual of Surgical Anatomy, by H. M. EDWARDS, D.M.P. *Translated, with Notes, by* WILLIAM COULSON, Demonstrator of Anatomy at the Medical School, Aldersgate-street, &c.—12mo. pp. 427. Simpkin and Marshall, London, 1827.

THE work before us is the production of Dr. MILNE EDWARDS, of Paris, who, it appears, had long entertained the design of publishing a work on Surgical Anatomy, and was actually engaged in the execution of it, when, in 1825, a treatise by M. VELPEAU* on the same subject made its appearance. But the plan of the treatise appearing to Dr. Edwards too minute for an elementary work, he completed his previous intention, and consequently published the Manual before us.

Surgical anatomy (in the true meaning of the term) embraces a wide and rich field for professional inquiry. It comprehends not only such a knowledge of the relative situation and action of parts as to enable a surgeon to perform operations with safety, and treat accidents judiciously, but it also points out the influence which the organisation, form, and situation of a part exercise on the development and treatment of those surgical diseases to which it is exposed. This latter branch of the subject has not been cultivated with the same success as the former, because those minute structures, upon a knowledge of which its successful cultivation depends, have not been generally studied, and are even yet by many but imperfectly understood. In Dr. Edwards' Manual we are glad to find considerable attention paid to the fasciæ in the different parts of the body, and their influence on the principal surgical diseases minutely pointed out.

Surgical anatomy has been called on the continent "anatomy of regions," because, for facilitating its study, the division of the body into distinct regions is generally adopted. In this work the body is divided into seventeen of these; the anatomical descriptions of the parts in each region are given, and then the practical observations, to which these descriptions give rise, follow. Thus, after giving the anatomy of the liver, the author remarks:

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* Traité d'Anatomie Chirurgicale; ou, Anatomie des Regions. 2 vols.—Paris, 1825.

"The relations which exist between the liver and surrounding parts are sufficient to explain the different passages by which the pus makes its escape externally in abscesses of the liver. In fact, if the matter be seated near the convex surface of the liver, adhesions may form between the parietes of the abscess and the diaphragm, and between this muscle and the lungs. Hence, by the process of ulceration, the pus may proceed into the cavity of the thorax, or even pass into the bronchi. If the abscess is situated near the anterior edge of the convex surface of the liver, adhesions may form between this part and the abdominal muscles, and the collection of matter may open externally into the right hypochondriac region, or even into the epigastric. Lastly, abscesses situated near the concave surface of the right lobe often empty themselves into the colon, and those placed near the inferior surface of the left lobe sometimes also open into the stomach." (P. 291.)

The following is an extract from the description of the anterior cervical region, which is well deserving the attention of our readers:

"Immediately under the skin, we find the superficial fascia, and between its two layers, the platysma myoides. This muscle is quadrilateral and very thin; it is attached inferiorly to the subcutaneous cellular tissue that covers the deltoid and pectoralis major; higher up, its fibres are directed obliquely upwards and inwards, and are lost above the lower jaw on the inferior part of the cheek. On the chin, the anterior part of the muscle is confounded with that of the opposite side, but it separates in descending, and thus leaves, on the median line, a triangular space, in which the two layers of the superficial fascia of the neck unite, and form a thick and resisting membrane. This fascia is continuous superiorly with that which covers the parotid gland: on the side of the neck it forms a dense layer, which, on the upper portion of the sternó-mastoid muscle, adheres strongly to the skin. Near the anterior edge of the trapezius, it loses its aponeurotic appearance; but it first sends off an elongation, which is attached to the temporal bone near the mastoid process, and which dips beneath the anterior edge of the sterno-mastoid muscle. Inferiorly, it is prolonged on the anterior surface of the sternum, under the form of subcutaneous cellular substance; and, on the upper edge of this bone, between the tendons of the sterno-mastoidei, it sends off an elongation, which proceeds backwards and downwards, and unites with another aponeurotic membrane. The superficial fascia of the neck is formed by the subcutaneous cellular tissue: in very fat individuals it is indistinct, whilst, in lean and anasarcous subjects, it has the appearance of an aponeurotic membrane; but it is chiefly when tumors exist in this region that it becomes strong and resisting: we, however, never perceive muscular fibres in it.

" The external jugular vein, which we have already seen descending from behind the parotid gland, upon the lateral part of the neck, continues its course immediately under the platysma myoides and the superficial fascia, towards the posterior edge of the inferior extremity of the sterno-mastoid muscle: it then descends vertically to reach the subclavian vein. During this course, it follows nearly the same direction as the fibres of the platysma myoides. When phlebotomy is performed here, it is, therefore, proper to make the opening more or less oblique in relation to these fibres.

" A vein descends from the lateral part of the face, runs under the superficial fascia on the fore part of the neck, and along the anterior edge of the sterno-hyoid muscle, and often acquires a considerable size near the bottom of the neck, and communicates with that of the opposite side by a pretty large branch. In the operation of bronchotomy, this anastomosing branch may be opened in dividing the integuments; and the blood that escapes might embarrass the surgeon, but it will not be productive of any bad consequence. In fact, this vessel, as well as its lateral branches, being situated immediately under the superficial fascia, and above another aponeurosis still deeper, which we shall presently notice, the blood will escape externally with greater ease than it can flow into the trachea.

" Under the superficial fascia of the neck, we find a second aponeurotic cellular membrane, which constitutes the deep fascia: it is fixed superiorly along the edge of the lower jaw, is continued laterally with the stylo-maxillary ligaments, and divides into two layers, to surround the sub-maxillary gland: it is attached to the projecting part of the thyroid cartilage, and again forms two layers. The anterior layer is extended upon the tendons of the sterno-mastoid muscles, and becomes continuous with the superficial fascia on the anterior edge of the sternum; the posterior proceeds to the posterior surface of the sternum, and is separated inferiorly from the anterior layer by a quantity of fatty cellular substance, which generally incloses some lymphatic glands. Upon the sides of the neck, this fascia degenerates into cellular tissue: its appearance also varies much, according to the individual; sometimes it is thin and cellular, at other times it is thick, and almost as distinct as the aponeuroses of muscles.

" One of the principal uses of the cellular layers which surround the inferior part of the neck, is to resist the pressure of the atmosphere in the moment of inspiring, and to prevent the trachea from being compressed by this force each time the thorax dilates. Thus when, in consequence of an ulcer, or other causes, these fasciæ, and the sterno-hyoidei and sterno-thyroidei muscles placed under them, are destroyed, the parts which at this point close the top of the thorax are not sufficient to resist the pressure of the atmosphere, and, when the chest dilates, they are forced forwards, and, by pressing on the trachea, produce a considerable difficulty in breathing.

"Some lymphatic ganglia, as we have said, are found above the edge of the sternum, in the adipose mass situated between the superficial and deep fasciæ. When these glands enlarge, a tumor arises, which may be mistaken for a morbid state of the thymus gland; but it does not produce the same degree of dyspnœa, the deep fascia preventing it from compressing the trachea. We also find lymphatic glands in other parts of the neck: some are placed above, and others below the fascia; and from these differences of situations arise great varieties, both in the characters and treatment of the tumors which they form. In fact, tumors situated between the integuments and cervical fascia are superficial, circumscribed, prominent, and moveable. For a long time, by pulling these tumors outwards, we can raise them sufficiently to be able to pass the fingers between their base and the neighbouring parts. They, however, form connexions at last with the fascia behind them, and cause either a thickening of that membrane and its adhesion to the adjoining parts, or else its absorption, in which case they sink among the deep parts to which they also become adherent. Therefore when, from their anatomical structure, extirpation is deemed advisable, the operation ought to be performed without delay, before adhesions form. The tumors which form under the cervical fascia are more frequent and more dangerous than those that form above that membrane. The resistance which this fascia offers to their development flattens them, and prevents the appearance of any external projection, before they have acquired a very considerable size. They, therefore, can only extend inwards, and sink between the muscles, vessels, and other deep parts: their extirpation is, consequently, attended with very great difficulty. This circumstance explains why those tumors occasion a difficulty in breathing, much more severe than their size would lead us to expect." (P. 89.)

Our limits will not allow us to give further extracts. The work contains a great deal of practical information, which cannot fail to be interesting to the surgical practitioner and the student. In another edition, we think plates, containing views of the parts concerned in the principal operations, might be given with advantage.

The translation is well executed, and Mr. Coulson has increased its value by the addition of notes containing information derived from the records of both English and German surgery.

A Treatise on those Diseases which are either directly or indirectly connected with Indigestion; comprising a Commentary on the principal Ailments of Children. By DAVID UWINS, M.D.— London, 1827.

THE work of Dr. UWINS is divided into three parts: the first relating to various general questions; the second to Diseases of Children, comprising desultory remarks on some of the complaints of Adults; the third to Indigestion.

The first division of the work is occupied with a tirade against all medical theories; in the course of which, however, the author shows himself to be one of the greatest theorists we have ever met with. All the peroration amounts simply to this,—that theory, if carried too far, is bad; that preconceived opinions and nosological distinctions must yield to facts; and that a man is more likely to learn the practice of physic at the bedside of the patient than in the closet: in all of which positions we entirely agree with Dr. Uwins.

The second chapter contains an anatomical and physiological account of the digestive apparatus, possessing nothing either new or attractive; and, in the third, we have a sketch of the differences of constitution observed in different individuals.

The second part opens with the consideration of "ailments principally of children, which originate in, or are connected with, faulty digestion." A child is described, much at length, as labouring under that combination of symptoms which is commonly implied in the term "remittent fever." In the course of the narrative, we are informed, among other things, "that an unhealthy excitement of *parts* is engendered by the torpor of the *whole*;" and that, while the arteries are doing too much, the lymphatics are doing too little. Now, the author is of opinion that the indications presented by this condition are most completely and satisfactorily supplied by digitalis. In short, the object of the entire section is to show that, while the "lymphatic organization requires a spur, the arterial impulse demands a bridle;" and foxglove is both the spur and the bridle: a piece of theory which the author very properly remarks, "may, or may not, be correct."

Hydrocephalic and convulsive affections are next spoken of in the same desultory manner. The only circumstance worthy of remark is, that in the former small doses of elaterium are recommended, and that the author, in some few cases where he believes effusion had taken place on the brain, met with "extraordinary success from tincture of cantharides, in doses of about four minims to a child of two years old, frequently repeated." In the convulsions of infants, he thinks bleeding is used too freely, and opium too much neglected. The beneficial influence of opium after bleeding is supposed to depend upon its "lessening the diameter of the capillaries," and thus preventing "that rush of blood again into them which is so apt to succeed to depletion of vessels." Indeed, it is remarkable throughout that Dr. Uwins, who sets off by condemning theory, has an hypothesis for every thing.

Under the head of Worms, which comes next, there is not a single remark worthy of being quoted; and, in the sections which follow on various forms of eruptions, the only circumstance with which we shall trouble our readers, is the author's statement that he uses largely and successfully in "skin disorders" the following prescription. It is unchemical, but we believe that chemical principles have very little to do with curative effects.

℞. Ammoniæ Subcarb. ℈ss.; Magnesiæ Sulphat. ʒj.; Mist. Camphoræ ℥jss. Fiat haustus.

In Hooping-cough, the combination of "cochineal with salt of tartar" is highly praised, and the effects of Roche's embrocation are said to be sometimes "miraculous."

A few remarks on Croup, in which the common treatment of bleeding, calomel, and antimony is recommended, terminate the chapter.

The author next proceeds to speak of Consumption, under which term are included simple abscess of the lungs, malignant tumors ("soft cancer,") schirrus, and syphilis, as well as true tubercular phthisis. In this blending together of diseases entirely different in their nature, the only circumstance which arrests our attention is the assertion that the author has "frequently witnessed" consumption dependent upon schirrus of the lungs. This we apprehend to be a mistake: schirrous degeneration of the lungs is a very rare occurrence, and we suspect either that he uses the term vaguely, or else that he has not sufficiently distinguished between true schirrus and other indurated conditions of the lung, bearing more or less resemblance to it. Attention to diet, exercise, and climate are enjoined, much in the same way as in every other work of the kind published during the last twenty years.

Asthma is justly said to be greatly modified by the state of the digestive organs, and the views of our author on the subject may be conveyed in very few words, and those his own:—"Of medicinals for stomach asthma, the two main ones may be set down as soda and rust of iron;" and again—"During the violence of the paroxysm, a liberal use of those medicinals which go under the name of antispasmodics may be safely had recourse to."

Although, in some of his sections, we think our author has discussed matters but very remotely connected with the avowed object of the work, yet this remark does not apply to Affections of the Heart, which come next to be considered. Dr. Uwins alludes to the difficulty of distinguishing functional from organic diseases, and mentions some cases in which patients have entirely recovered, although the evidence of change of structure appeared *a priori* to be very strong. He relates the case of a friend of his, whose brother died of organic disease of the heart, and who for a long time laboured under symptoms which led to the apprehension of his having become similarly affected. He took many remedies without avail, and at length was permanently relieved by the spontaneous supervention of a bilious diarrhœa. Dr. Uwins is anxious to show that it was not the mere discharge of bile, however, which produced this effect, but some occult change, concerning which the author himself does not appear to entertain very precise ideas. "It is (says he) a change in the sentient organization, eluding the sight and almost the conception, that regulates often these sympathetic and *mimositic* maladies, and which are occasionally referred to a matter retained while that something, the expulsion of which is consentaneous with the cure, seems to be manufactured, as it were, in the moment, and is merely the manifestation or effect of the required change which has set all to rights."

In the immediate attacks of "heart affections," Dr. Uwins thinks the principal difficulty consists in determining whether they depend upon accumulation of blood in quantity greater than the organ is capable of propelling, or whether the heart suffers collapse from a want of the requisite supply of nervous energy. It is certainly quite conceivable that either of these conditions may cause the heart's action to be interrupted or to cease, but we are sorry that we cannot give from the work before us any satisfactory method of distinguishing between them. Even in those cases where bleeding has been required, and *a fortiori* in those where it is not, stimuli are regarded as necessary; and of these, ammonia is held to be the best.

A succession of short chapters, or sections, follow, on Apoplexy and other subjects; but they are so wholly destitute of interest, that we cannot fix on a single novelty to present to our readers. Passing these by, therefore, without farther remark, we proceed to consider a very important question—the means of distinguishing between sympathetic and organic diseases. The pulse is said to be one of the best means of forming this diagnosis. Sudden variations in the frequency of the pulse, depending upon the mental feelings of the patient, are characteristic of merely nervous affections; while the quickness of pulse which is permanent, and little, or not at all, influenced by the moral impressions of the patient, is generally connected with structural disease: in other words, the former, proceeding from a transient cause, gives rise to a transient effect; while the latter, resulting from a permanent cause, produces an effect which is also permanent. The pulse, too, is stated to be harder when the blood-vessels are engaged in the disease, than when this is limited to the nerves. But Dr. Uwins does not place much confidence in those minute shades of difference in the character of the arterial pulsations, which have been described, and "some (he remarks) may probably affect to have, or cheat themselves into the supposition of having, more delicacy of perception than is positively the case; just as some would profess to feel or fancy they felt more pleasure in musical sounds than they actually do, merely because the want of the pleasure might be thought to imply a general deficiency of sentiment or taste." There is some justice in this remark.

The state of the spirits, also, assists in the decision: they who fear most having generally least cause to fear; and the actual supervention of an organic disease sometimes producing a certain degree of firmness and fearlessness of mind. The countenance, too, is characteristic of the presence or absence of organic change; and here, likewise, permanency is connected with disease of structure, mutability with disorder of function. To give any correct idea of varieties of expression by words must at any time be difficult, and, with the vague language of our author, the attempt would be hopeless.

The supervention of hectic is mentioned as indicative of disorganisation, but it is too obvious to require that we should dwell upon it.

The presence of much flatus is looked upon as favorable: "for the most part, (says our author,) where there is much flatus, there is little of formidable disease." This is unquestionably true with regard to those affections commonly understood by the term nervous; but in other cases, it is just the reverse. Thus a flatulent and tympanytic state of the abdomen, in the advanced stage of fever, is indicative of the presence, not the absence, of change of structure.

Dr. Uwins thinks that seeing and feeling are of more use to the physician than hearing, and speaks rather more disrespectfully than some will like of the stethoscope, many of the boasted discoveries of which he holds (and we agree with him) are not made "till you have pretty well made them out by other means."

We have now arrived at the commencement of the subject which constitutes the proper business of the volume, and at the end of our analysis. The third part treats of digestion, "in the abstract and popularly," and consists of a running commentary on the works of Dr. PHILLIP, Dr. PARIS, and Dr. JOHNSON. It is our object to convey to our readers as faithful an idea as possible of any thing in the works which we review that may be peculiar, either in matter or manner; and, when we find neither, we think it an act of kindness, both to them and the author, to shut the volume.

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

PHYSIOLOGY.

Peculiarities in the Sense of Smell.—Dr. VOGEL has made some rather interesting remarks on the above subject in HECKER'S *Litterarische Ann. der gesammten Heilkunde.* Of these we subjoin an abridged account.

The astonishing variety of odours emitted from different bodies is at once a curious and interesting subject of investigation. Not only the animal and vegetable kingdoms, but even stones, earths, and metals, give forth a different scent. Under particular circumstances, also, the same body smells differently at different times. Pure earth and water, ice, glass, the fixed salts, most metals, &c. are generally considered to be inodorous, but they are not so under certain circumstances. Those substances which, to the generality of mankind, appear devoid of scent, are odoriferous to more perfect and acute olfactory organs than they possess. The Peruvian Indians, it is well known, can distinguish, during the night, the various races of Europeans, Americans, or Negroes. The Calmuck can trace his steps through the most extensive heaths by the odour of the various plants upon which he treads in his journey. The traveller from Smyrna or Aleppo to Babylon can determine the distance he is from the latter place by the smell of the sand in the desert.

The sense of smell is most powerful in a state of nature. A boy, who was found wild in the woods of Aveyron, possessed so delicate a sense of smell, that all his powers appeared to be concentrated in the olfactory organ, which in proportion as he became civilised, lost its extraordinary acuteness.

It is a well-known fact that the sense of smell is more acute in those persons who are deprived of any other sense, particularly sight. The odour of many bodies is not perceptible to most individuals, excepting under certain influences which increase its intensity. Such are friction, warmth, light moisture, electricity, solution in spirituous liquors, chemical changes, the morbid condition of animal bodies, &c.

The sense of smell varies in different persons as much as that of taste. In some individuals it is unusually acute, as in a woman who could always foretel the approach of a storm by a sulphureous odour in the atmosphere. From various local or general morbid affections, the sense of smell may be increased or diminished in power.

The keen and discriminating power of the olfactory organ in various species of dogs is well known. They pursue their game, which flies before them at a considerable distance, without their true scent being at all interrupted by the various odoriferous bodies which must lie between them and their prey. Haller relates the story of a dog which followed his master who was more than a hundred miles distant, and then immediately discovered him amongst a crowd of people. There are many most extraordinary, yet well authenticated, facts in confirmation of the very acute olfactory powers of bloodhounds, and other animals. A traveller in Africa would have perished from thirst if a monkey, that accompanied him, had not led him to a spring at a considerable distance, and far beyond the sight. Neither the man nor the animal had ever been there before, and the fact is the more curious as pure water is nearly inodorous. The monkey might, indeed, be attracted by the smell of certain plants which grow near springs, and of which he possessed an instinctive knowledge.

Humboldt relates that, in Peru, large numbers of the Vultur are collected round a horse or cow slaughtered for the purpose, although there were previously none to be seen in the neighbourhood. It has also been said that the same bird has travelled from Asia to Thessaly, for the purpose of devouring the dead bodies on the field of battle.

The rapidity with which insects collect from a distance round sugar, honey, &c. is well known. Fish do not see the bait of the angler; they are attracted to it entirely by their acute smell. Every animal, and every organic and inorganic body, must have a peculiar odour, a specific emanation imparted to the surrounding atmosphere: otherwise the hound could not follow his master, and immediately distinguish the various things he had touched; nor could the ape be led to the spring at a considerable distance.

The acuteness of the sense of smell is in general in proportion to the size of the nostril. The odorific effluvia, or exhalation, which is given out by various bodies, extends to various distances. Bartholin declares that the approach to Spain may be ascertained at the distance of forty miles, by the smell of rosemary. The odorific particles which thus affect the surrounding atmosphere are so wonderfully minute, that, notwithstanding their immense numbers, the bodies from which they are emitted are not perceptibly diminished. Haller found that a bundle of papers, consisting of 400 dissertations, which had been perfumed with a single grain of musk, retained a powerful smell in every part after a lapse of forty years. In his Elem. Phys. v. 157, he makes a calculation of the very delicate division of the grain of perfume which had produced so lasting a scent through so many folds of paper. We are as yet incapable of estimating the weight* of such minute atoms of matter, or of explaining the essential distinctions between the exhaled particles which constitute such vast varieties of odour. The division of the particles of light and caloric is still more subtle and incomprehensible than that of the odorific atoms, for they are enabled to penetrate glass and other bodies.

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* Prevost, of Genf, has invented an instrument called the Odoroscope, for the purpose of weighing the odorific exhalations from bodies.

The odorific exhalation sent forth from the human body, proceeds either from the whole surface or from particular parts. It varies, under different conditions, both in quantity and quality. The trade, age, sex, and temperament of the individual,—climate, temperature, certain diseases, and passions of the mind, each produce variations in the smell of the effluvium which emanates from the body. At the period of menstruation or childbed, the odour emanating from the female is very peculiar. The food and particular manner of living have great influence upon the odour of the body. The French soldiers asserted that they could smell the Cossacks many hours after their departure from any place.

The effect produced upon the matter exhaled from the body by various mental emotions is very remarkable, particularly from rage, fear, or settled melancholy. By an attentive observation of changes produced by disease in the odour of the perspiration, the physician may frequently be enabled to form a more accurate opinion. A practitioner in Berlin, from having a very acute smell, is frequently enabled to determine the particular species of exanthematous diseases before the appearance of the eruption, entirely from the peculiar odour of the patients. Esquirol assures us, that, however attentive we may be to cleanliness in the persons of maniacs, there is always a specific odour arising from them. During many maladies, the acuteness of the sense of smell is wonderfully increased, and sometimes it is completely changed. A celebrated physician of Paris, who was confined to his bed, was constantly tormented by a metallic smell, which arose from a needle that had been lost in the bed-clothes. During inflammation of the brain, the sense of smell is particularly acute. Bailly, who was attacked with yellow fever, attended by much cerebral irritation, distinguished in the water which he drank the smell of the vegetables which grew upon the border of the river from whence the fluid was taken. The near approaches of death may often be known by the peculiar odour of the patient.

Almost every part of the human body has a particular smell, and the variable odour of the breath is well known. If the changes in this were more carefully observed, the diagnosis of the physician might be improved, particularly in febrile diseases. The author has related a case, in his *Anthopot. und Med. Erf.*, of a woman who could distinguish persons by the peculiarity of their breath. A very pungent and ammoniacal smell frequently proceeds from the feet, and, if it be suddenly checked, severe diseases are often produced. Very offensive exhalations occasionally proceed from the genitals. Dr. Vogel met with one instance in which, if the discharge on which this depended was suppressed by the application of cold, it took place vicariously from the axillæ. It sometimes ceased spontaneously. During its disappearance, the patient suffered severely from heartburn.

There are many cases on record of powerful passions and antipathies which have been excited by the peculiar odour exhaled from the bodies of particular individuals. There are many circumstances which confirm the opinion that there is combined with the insensible perspiration some electrical power which is distributed in the surrounding atmosphere. The author is acquainted with a lady from whose skin electric sparks are emitted whenever she changes her under garments.* It cannot be doubted that, by approaching a being intimately connected with such persons, other individuals will be more or less influenced. Certain antipathies which some persons have for cats and other animals, must be referred to an unusual subtilty of the sense of smell. Stanislaus, king of Poland, fainted whenever he entered a chamber in which there was a cat, although he could neither see nor hear it. A fellow student of the author's could also immediately tell if a cat was in the house, although he was in a different room.

PATHOLOGY.

Paraplegia.—Mr. Earle has made some good observations on this subject of which we subjoin the most interesting.

In the sixth volume of the Transactions of the College of Physicians, published in the year 1820, there is a valuable paper by the late Dr. Baillie, entitled "Some Observations on Paraplegia in Adults." In this paper he states his belief that this form of paralytic affection had considerably increased in this country, although he could not assign any reason for it. He further states, that, "in adults, when the spine has not suffered from outward violence, paraplegia most commonly depends on a disease of the brain itself." This assertion is hardly warranted by any direct proof adduced by the author in the paper in question, as only one dissection is given where there was extensive effusion in the membranes and ventricles. It is true that, in some additional observations published in Mr. Wardrop's edition, he states, "Besides the account of the dissection published in my former paper, I have heard, from the most undoubted authorities, of one case where tumors were found in the brain, and of another where a large quantity of water was found in the ventricles of the brain, together with some in the theca vertebralis. To these (he says) I may add a third case, on the best authority, in which many of the arteries of the brain were found ossified, and a large quantity of water effused between the membranes and the brain."

From a long conversation which I had with the author in the beginning of the year 1822, I have strong grounds for presuming that these latter observations, which bear date April 1822, were partly in reference to some cases and dissections which I named to the Doctor, as he at that time distinctly avowed that his belief in the seat of these affections being in the brain did not rest on any additional anatomical facts, but was the result of his own reason. He was not aware, before that conversation, that I had published the dissections above alluded to, illustrative of this point, and appeared much pleased to find that I had confirmed the opinions he had advanced, by actual examination of the brain and spinal marrow.

It is not, then, without good reason that I venture to call in question the propriety of assuming it as an axiom, that "paraplegia in adults most commonly depends on disease of the brain." I admit that it is an occasional and not unfrequent cause; and, further, I admit that where such a train of cerebral symptoms exist as are described by Dr. Baillie, we should probably not err in referring the mischief to the head; yet I feel confident that the conclusion is too general, and would therefore warn practitioners against too hasty an adoption of it, as no doubt many instances occur in adults wholly dependent on diseases affecting the spinal marrow. The subject is one of much interest and often involved in obscurity, requiring the most minute attention to every particular, more especially when the more manifest symptoms of cerebral affection are absent. Having for several years directed my attention particularly to affections of the brain and spine, it may not be unacceptable to the members of this Society to present them with the result of my inquiries, illustrated with some original cases and dissections.

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* Haller has related similar facts in his Elem. Physiol. t. v. p. 54;—and we have ourselves met with instances of it.—Ed.

Although in many of these diseases it may not be possible to form a very correct opinion during life, yet there are many circumstances which, if closely attended to, will enable us to form a tolerably correct prognosis.

Paraplegia dependent on the existence of disease in the brain, generally occurs at the middle or more advanced period of life than is usual in diseases of the bodies of the vertebræ, or their intervening fibro-cartilages. Its progress is more rapid than the slow insidious approach of symptoms from the latter diseases; the affection is more general, occasioning more or less paralysis of the upper and lower extremities, and this will often take place in a very few days from the occurrence of the complaint. This disease happens much more frequently in men than women. The gait of persons suffering from cerebral affection is peculiar, and very different from that attendant on affections of the spine. It very nearly resembles the vacillating steps of a drunkard. Such paralytic persons are incapable of walking in a direct line; their limbs are loose, and thrown forward with an exertion of the whole body: there is a great consciousness of feebleness in walking, and the greatest difficulty in turning round. The appearance of the eyes often much resembles those of a drunkard, particularly when the patient is at all excited or anxious. The above analogy to the staggering steps of intoxication is readily understood, if we consider that it is the temporary disturbance of the brain, from the congestion of its blood-vessels, that deprives the drunkard of the power of directing his steps, and for the time induces a state bearing the closest resemblance to paraplegia.

Sensation is more impaired than in spinal affections, when it will often remain perfect after a total loss of the locomotive powers. This impaired sensation is often peculiar, imparting an idea of some foreign body, as a leather glove or stocking, being interposed. The patient appears to feel (if I may use the expression) through a false medium; the limbs are more wasted and flabby, without any spasmodic rigidity of the muscles, which so often occurs in affections of the spine. Although often accompanied with a torpid state of the bowels, aggravated no doubt by the impaired muscular power of the abdominal parietes, there has not, in any instance that I have witnessed, been any train of gastric symptoms similar to those which so constantly attend affections of the spine, especially of the dorsal region. In some instances there is the additional confirmation of an impaired state of some of the external senses, accompanied with vertigo, a sense of weight on the head, and a general disturbance of the cerebral functions. As disease advances, the power of the brain in transmitting its influence to the extremities becomes more and more circumscribed. Thus I have known a tubercular affection of the pia mater, in the first instance, cause a numbness and loss of feeling in the feet, which has gradually extended until all four extremities were completely paralysed, and the muscles concerned in respiration at length refusing their office, death ensued.

A very similar train of symptoms occurs in other diseases of the brain, particularly in cases of extensive membranous effusion from chronic inflammation, or effusion into the ventricles. In a case of fungus hæmatodes which I published in the third volume of the Society's Transactions, the same effect was produced; and I have since met with numerous cases of scrofulous tubercles in the substance of the brain, where the same phenomena were slowly induced, until suppuration has taken place, or the neighbouring membranes have become inflamed, when a fatal termination has rapidly ensued.

Whenever disease has proceeded so far as has been above described, one or more of the mental faculties has, in almost every instance, suffered; and no reasonable doubt can in such cases be entertained respecting the real seat of the disease. It is in slighter and more chronic cases that it is often difficult to form a correct opinion; yet to establish a correct diagnosis in such cases is of the utmost importance, both with respect to the prognosis we should form of the probable termination of the case, and with reference to the proper treatment to be adopted, that we may not subject the individuals to useless suffering from the application of caustic issues and setons to the spine, and the disappointment which would follow from their obvious inutility in such instances. (*Medico-Chirurgical Transactions.*)

PRACTICAL MEDICINE.

On the use of Belladonna as a Preventive of Scarlet Fever.—The attention of the medical profession was some time ago directed to the employment of belladonna as a means of preventing the occurrence of scarlet fever, in those persons who might be exposed to the contagious influence of that disease. This practice was first adopted by **Hahnemann**, and has subsequently been still further investigated by many German physicians of eminence. The following are the results which have been derived from a considerable body of experience.

1. In a large majority of cases where the remedy was employed, the disease did not occur in persons exposed to its contagion.

2. The extension of the epidemic was prevented by the exhibition of the belladonna.

3. When the disease did occur after the use of that medicine, its severity was much diminished in most cases.

To procure the full effects of its preventive powers, it should be given in the following manner:—Three grains of the extract of belladonna are to be dissolved in one ounce of water, with a small quantity of spirit of wine. As many drops of this solution are to be given twice a day as the patient has years of age. To protect the constitution against the contagion effectually, the remedy must be continued for at least eight days. From peculiar idiosyncrasy, the belladonna occasionally fails in rendering the patient secure against scarlatina. It has appeared also that some epidemics are less under its control than others.—These observations are taken from **Hecker**'s *Litterarische Ann. der gesammten Heilkunde.*

From the mode in which the "German physicians" now recommend us to employ the belladonna as a preventive of scarlet fever, it is evident that the extremely minute doses at first recommended by Hahnemann have not been found effectual. He at first administered the 432000th part of a grain of the extract; but his subsequent experience induced him to believe that even this was too powerful a dose! In this country the peculiar doctrines of Hahnemann are but little known; but on the continent, and particularly in Germany, he has gained many converts. An interesting sketch of his general views of disease, and of his mode of administering remedies, is given in the *Journal des Progrès dès Sciences Médicales*, tome i. 1827.

In addition to the above testimony of the German practitioners as to the preventive powers of belladonna against scarlatina, it may be satisfactory to add the results of Dr. Velsen's practice.* During an epidemic of scarlet fever in the town of Cleves, the belladonna was administered in six weeks to 247 patients. Out of this number, only thirteen contracted the disease:—Four children had taken the remedy irregularly; one child had taken it regularly for fourteen days; another had taken it eight days; and seven employed it only for forty-eight hours. Of these one, of a debilitated constitution, died. All the others had the disease very slightly, in comparison with those patients who had not taken the belladonna. The following striking proof is worthy of notice:—A man, the father of four children, was attacked with the prevailing epidemic after having visited a friend, who was confined to his bed with the same disease. His wife and children, the youngest three weeks old, the eldest four years, took the extract of belladonna regularly in the form and doses we have above mentioned. Although they continued to live with the patient, night and day, in a small and ill-ventilated apartment, they all escaped the disease.

Propagation of Fever.—Dr. Alison has made some important observations on this subject in the last Number of the Edinburgh Medical Journal. We subjoin the most interesting.

1. The very same houses and districts in which a succession of cases of fever is observed in one season, (chiefly in persons holding close intercourse with those already sick,) will remain, during a succession of other seasons, perfectly free from the disease, although inhabited by persons liable to it, although equally crowded, dirty, and ill ventilated, and although the disease be prevalent in other, even neighbouring parts of the town. This continual change of the seat of epidemic fever has always appeared to me nearly incompatible with the idea of its depending on a malaria. I have seen such successions of fever cases at one time or another, certainly in hundreds of places in the town; and I can say positively, not only that there is no one of these in which it prevails every year, but that there is no one from which it has not been absent for a succession of years within my own observation, even when prevailing in the vicinity.

The district in which, during the former epidemic, between 1817 and 1820 the greatest number of fever cases occurred to my observation, was a small part of the Cowgate and adjoining closes, 140 yards by 100, in which about 200 cases occurred in less than a twelvemonth. From many inquiries made there, I am certain that that district remained quite free from fever for several years together after that time; and, even during the present epidemic, I have not been able to hear of more than one house in that district in which fever has appeared, although I know two tenements just on its border in which it has been very prevalent, and caused several deaths.

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* Journal Complement. Octobre 1827.

The hospitals in which fever patients are received in this town furnish striking examples of the same general fact. When Queensberry House was formerly occupied by fever patients, every resident clerk and every menial in the house was successively affected with the disease; and, since it was re-opened in December last, the resident physician, two of the clerks, (who have not been resident, but have been several hours a day in the house,) the apothecary, several servants, and all the nurses except two, (in all above forty individuals, who had necessarily close intercourse with the sick there,) have had fever. If this be the effect of a malaria, it must be a very virulent and effective one, and it is reasonable to expect that some record of similar visitations in the former history of the building would be found. But Queensberry House has existed for about a century; it was long occupied as a private dwelling-house by the noble family of that name, afterwards it was occupied by a number of families, and afterwards as a soldiers' barrack; and yet no record can be found of its having been, during these changes, the seat of an epidemic fever. If a malaria has existed, therefore, in that house, it must, on both occasions, have sprung up exclusively at the times when fever patients were removed thither, and lasted only during their stay.

During the present epidemic, as well as in that of 1817-19, many of the clerks and nurses employed in the Royal Infirmary have taken fever. Since November last, six of the clerks employed in the clinical wards only, four of these employed in the ordinary wards, and twenty-five nurses or servants, have taken fever. All these nurses had necessarily frequent and close intercourse with the fever patients in the house, having been employed more or less constantly in the fever wards, excepting only four of the servants. Of these four, two had been employed in the laundry where the linen from the fever wards was washed; one was a porter employed at the gate, who would, of course, have communication with the fever patients at their entrance and dismissal, as well as with their relations coming to visit them; and one was a nurse employed in the servants' ward, but who was in the habit of visiting the fever wards.

Now, it is not only notorious that many years have often elapsed without any clerk, servant, or nurse, living in the Infirmary, or any of the students attending it, being seized with fever; but it is also certain that in this very season those of its inhabitants who have not had intercourse with fever patients have almost uniformly escaped the disease. Of the inhabitants of the ground floor of the house, (including the patients in the lock ward,) none but those already mentioned as having washed the linen from the fever wards, and the barber who shaved the heads of the fever patients, have taken the disease; yet in the case of a malaria it is the ground floor of a house that is generally found the most dangerous. No one of the nurses, whose duty has confined them to the medical or surgical wards, where no fever patients were admitted, has taken fever, with the single exception of the woman in the servants' ward above mentioned; and of the numerous patients in these ordinary wards, the only one who has taken fever, within my knowledge, during the present year, was a patient in the men's general clinical ward, who lay in the bed next the door that communicates with the clinical fever ward. If there be a malaria in this house, therefore, it would seem to restrict itself in point of space, as at Queensberry House in point of time, to the immediate vicinity of the fever patients.

2. While it appears that there is no part of the town subject to regular or

even frequent visitations of fever, experience shows equally clearly that there is no part of it in which, when fever once occurs, a rapid succession of cases may not be observed, provided that frequent and close intercourse be kept up between the healthy and the sick. I have seen this myself under such circumstances in every possible variety of situation in Edinburgh and its vicinity, high and low, damp and dry, or even airy and confined, and often in situations widely different from those in which the malaria that produces intermittent fever is known to be chiefly generated. For example, when a person has fallen ill of fever, and lain some time in the upper story of one of the common stairs in the High-street, or adjacent closes, I have often seen a succession of other cases on the same flat, sometimes extending to the next below, while the inhabitants of the lower part of the same tenement, (sometimes of five or six stories,) have continued free from the disease.

In short, I have seen enough to convince me that, while there is no part of the town in which fever prevails regularly or very frequently, there is none in which it may not at times spread epidemically.

3. The succession of fever cases in limited districts takes place in some seasons much more rapidly and extensively than in others. But it is certainly a general fact, that it takes place, *cæteris paribus*, always more rapidly and extensively as the intercourse of the healthy with the sick is more close and intimate. Very close intercourse, even in well-aired rooms, is often followed by the effects in question, as appears from the number of nurses, and even of clerks, affected in the hospitals. Frequent and long-continued intercourse in close confined rooms is almost uniformly followed by this result: not in all those who hold such intercourse, but in a large proportion of them, and especially in young persons; and the more airy the rooms of the sick, and the less frequent the intercourse, the fewer instances of successive affection are observed; In the new town of Edinburgh, where almost all the houses are spacious and well aired, isolated cases of fever are common, and, when a succession of cases is observed, it rarely extends beyond a few individuals. But in the crowded and ill aired parts of the old town I can hardly recollect an instance, even during the years when the disease was least generally prevalent, of a patient in fever having lain at home during the whole disease without some other cases speedily following; and in many instances, when the disease has been more prevalent, the succession has extended to ten, twenty, or thirty, within a few yards of the residence of the first patient. All this corresponds exactly to the supposition of the disease being propagated by effluvia arising from the sick; but we know that the malaria arising from the earth, which engenders ague, is *much less* virulent in crowded than in thinly inhabited districts; and although it is certainly possible that there may be another kind of malaria generated within houses, or even in single rooms, and which may be increased by imperfect ventilation, yet it is hardly possible to conceive how the circumstances of crowding, or closeness of intercourse with the sick, should increase the efficacy of such a malaria, as they certainly do increase the tendency of continued fever to spread.

4. The efficacy of intercourse with the sick in producing the successions of fever cases, has seemed to me to be strikingly exemplified in several instances, in which fever has clearly appeared to be imported into particular districts, by persons whom I knew to have either had the disease themselves, or to have had close intercourse with the sick in other places. Two examples of this kind are, I think worthy of being put on record.

Some years ago, at a time when there was no great number of fever cases in Edinburgh, I met with a case in the son of a shoemaker, who was lying in a room in which his father and two apprentices were at work. I could not prevail on the father to remove his son to the hospital, although I stated the danger of the apprentices being affected. Within two or three weeks after, I found that the two apprentices were lying ill of fever in their own houses,—one of them 200 yards, the other half a mile distant from the workshop, and widely distant from each other. These young men likewise lay at home during the fever, and each of their cases was speedily followed by a succession of others in the inhabitants of the rooms which they occupied, and of those immediately adjoining, who had never been at the workshop. In one of these houses seven, and in the other twelve, were thus affected. Now, on the supposition of the fever being contagious, all this was to be expected, and all corresponded to the predictions which were hazarded on that belief. But, on the supposition of such succession of fever cases depending on miasmata, there must have been at least two, more probably three, separate and accidentally concurring miasmata to explain the phenomena here observed: one at the workshop, and one at each of the houses of the apprentices; and there must have been this extraordinary coincidence, that at each of these last the malaria sprung up just at the time when a patient was lying there ill of fever, which he had apparently contracted elsewhere. Farther, the three houses in which these successions of fever cases were observed are in situations very different from one another; and all of them have been, to my knowledge, perfectly free from fever for years together, both before and since that time, notwithstanding that fever has been much more generally prevalent, and that they have been inhabited by successive families. What probability is there that three separate miasmata should have arisen in these three houses just at the time when their presence was required in each, to produce an effect which had been foretold as the consequence of another cause undeniably operating on all?

In the beginning of last winter, a family, consisting of a labourer, his wife, and four children, long out of employment, became affected with fever; the mother first. During her convalescence the father and two sons were sent to the Infirmary, and she and the others were turned out of their house when still very feeble, and found shelter with an acquaintance. When the father and sons left the hospital, the whole family again removed to a third house, considerably distant from the former, taking with them only some miserable dirty clothing. After many inquiries, I could not find that there had been previously any fever in any of the three places which they thus successively inhabited; but it is certain that many inhabitants of the same floor in which they first lived (and no others in that neighbourhood,) had fever immediately after them;—that, in the little court to which they next removed, thirty cases of fever occurred within a few weeks after they went thither, the inhabitants of the same room with them being the first affected;—and that from the third lodging-house which they occupied in the course of the winter, and within a fortnight after their arrival in it, four patients in fever were received into Queensberry House. Here again we must, on the hypothesis of a malaria, suppose three separate miasmata, and a wonderful accidental coincidence between the springing up of each and the application of the very cause which the other hypothesis assigns as the true explanation of the whole phenomena in question.

Lastly, the dependence of the successions of fever cases on the circumstance of intercourse with the sick, has appeared to me in many cases to be clearly indicated by the success of measures (especially the early removal of the sick,) taken to prevent the propagation of the disease, on the supposition of its proceeding from that cause, and which could not have a beneficial effect under any other supposition. This is a principle not susceptible of actual demonstration, but the probability of which increases so much on every repetition of the observation on which it is founded, as to amount ultimately to moral certainty. It is quite clear that, if the successions of cases in limited districts depended on a malaria in each, these successions should be equally apt to take place when the first patients were removed, as when they remained at home during their illness. But while it is, as I have already said, exceedingly rare to see a case of fever run its course in any of the crowded districts, without other cases speedily following in the immediate vicinity, nothing is more common than to see single cases not followed by any others, when they are removed to the hospital within a few days from their commencement. What was stated as the result of my experience in the New Town Dispensary during the former epidemic, is strictly applicable to all that I have seen in the present. "We should have little difficulty in pointing out above a hundred houses where a single case of fever has occurred, where the patient has been speedily removed and the place cleaned, and where there has been no recurrence. But we should hardly find five houses in all the closes of the old town in which a patient in fever has lain during the whole, or even during half of his disease, and in which other cases of the disease have not speedily shown themselves."

I have stated the results of my own observations on the cause of the propagation of the disease, without any reference to the statements of others; but it were easy to show—indeed it must have occurred to most readers,—that they correspond exactly with what has been observed by those authors whose writings on the subject of contagion are most esteemed in this country. Taking all the facts above stated together, and comparing them with the concurring testimony of many other observers, I must profess myself to be not only satisfied with the evidence on this point, but also at a loss to understand what better evidence can possibly be expected. At all events, it is plain that the evidence rests entirely on *comparative observations*, and is very different from that which is furnished merely by the *simple observation* of a number of fever cases occurring simultaneously or successively in a limited district; and that it cannot be refuted merely by pointing out the fallacy attending conclusions drawn from such simple observations only.

No doubt it is difficult to understand why, of a given number who have intercourse with the sick, some only should be affected, and others should escape; but the same difficulty attaches itself to almost every other instance in which a disease is referred to its exciting cause, there being no cause of disease which acts with perfect certainty and uniformity. And at all events the same difficulty attaches itself to the explanation of the diffusion of fever by the supposition of a malaria. To start this difficulty, is in reality to express a doubt whether the fact of the successive affections of persons living near one another is one so generally observed as to demand an explanation at all; whereas it is allowed, I believe, by all inquirers, that this fact, though not a constant and invariable one, is yet one so generally observed as to demand some explanation; and the only question is, what explanation is the most consistent with the phenomena?

It should not be overlooked, in any discussion regarding the contagious nature of fever, that in those seasons when it prevails most epidemically, and very remarkably in the present, it is very frequently attended by an eruption of the skin, closely resembling what is seen in some of the contagious exanthemata, particularly the measles. A majority of the cases treated by me in the hospitals during the present year had more or less of this eruption. It was most distinct and numerous in severe typhoid cases, but not confined to cases of any peculiar type. It was very irregular in its time of appearance and disappearance; seldom appearing, however, before the fourth or fifth day, sometimes not till the tenth or twelfth; in which last case it was attended, I think uniformly, by an aggravation of the febrile symptoms, and was of course a very unfavorable sign. It very seldom assumed the appearance of true petechiæ. Such cases of spotted fever may be said to form the link that connects the order of fevers with that of contagious exanthemata.

Employment of Iodine in the Treatment of Cynanche Parotidœa.—Dr. **Neumann**, of Neustadtel, in Silesia, has employed the hydriodate of potass with great success as an external application in cynanche parotidœa, which prevailed epidemically in Neustadtel in June 1823. Among the poorer orders who were treated in the ordinary way, the disease was very tedious, and generally ended in suppuration. Among the better ranks, the treatment consisted in the exhibition of an emetic, and the application over the tumor of a plaster composed of eight parts of mercurial ointment and one part of the hydriodate of potass; and the ordinary effect was a radical cure within three or four days. Dr. Neumann adds, that he never observed in the cases so treated any metastasis to other organs; and he is disposed to impute this to the formation of an erythematic eruption, which always appeared on the first or second day, and remained from eight to twelve days.—The author has annexed a very instructive case illustrating the deleterious effects of this drug when given in too great quantity. It was given to cure enlargement of the cervical glands, which it accomplished very effectually; but the patient was at the same time attacked with violent palpitation in the chest and abdomen, which was relieved only by the horizontal posture, then with great weakness and tendency to faint, and subsequently with emaciation and general dropsy. The palpitation was so violent and constant as at first to appear connected with organic derangement; but the relief obtained from the horizontal posture, the absence of cough and dyspnœa before the dropsy commenced, and the regularity of the pulse, led Dr. Neumann to conceive that the disorder of the heart was merely functional. Accordingly, although the patient had been ill for a twelvemonth, the irregularity of the heart's action was soon subdued by the employment of digitalis and cherry-laurel water: and the tendency to faint and anxiety at the same time disappeared. The dropsy, however, continued much longer; but at length it slowly receded under the use of the Arnica combined with soap. (Rust's *Magazin für die gesammte Heilkunde.*)

Bite of the Viper.—M. **Jacopo Sacchi**, of Barzio in Valsasina, having had occasion to take charge of some cases in which injury has been inflicted by the bite of a viper (Coluber Berus), transferred his observations upon them into the hands of Professor **Paletta.** From these it appears that ammonia, recommended by Dr. **Mangili** in 1813, although an excellent remedy in many cases, is by no means sufficient in all, but must occasionally be seconded by every possible means. Although sometimes nature alone has power sufficient to overcome the bite of a viper, yet at other times the injury is so great and sudden, as to resemble the effects of hydrocyanic acid. In these cases he recommends that the patient should be put into a hot bed covered with woollen clothes, and the most powerful sudorifics, with some tonics, administered internally. Friction should be applied all over the body, and at the same time the wounds are to be enlarged, cupping-glasses applied, and tow dipped in ammonia applied to the spot. (*Journal of Science.*)

SURGERY.

Dislocations of the Vertebræ.—The following extract is from a paper by Mr. **Lawrence**, in the *Medico-Chirurgical Transactions.*

Complete dislocations of the vertebræ without fracture, whether produced by accident or disease, are so uncommon, if we except the first and second bones of the neck, that the possibility of the occurrence has been doubted, and even denied, by some of the highest authorities. In the Traité des Maladies Chirurgicales, which contains the valuable results of his long experience, Baron Boyer points out the circumstances which prevent the displacement of the bodies of the vertebræ, and, without expressly denying it, appears clearly to disbelieve its possibility.* He asks the question, whether the bodies of the vertebræ can be luxated?—alludes to the kind of accidents under which such displacement has been considered probable;—and then, having shown the powerful obstacles to it, concludes by observing, that, if we examine the cases in which dislocation has been supposed to have occurred, we shall find invariably that the posterior laminæ of the vertebræ have been broken; that in many instances they have been comminuted; and further that, when the body of a vertebra has undergone any displacement, the laceration of the fibro-cartilage has been almost always accompanied by detachment of some portion of the bony substance.

Delpech represents it as a point proved by observation, that the bodies of the vertebræ cannot be dislocated.†

Sir A. Cooper‡ says, that "if luxation of the spine ever does happen, it is an injury which is extremely rare, as in the numerous instances which I have seen of violence done to the spine, I have never witnessed a separation of one vertebra from another through the intervertebral substance, without fracture of the articular processes; or, if those processes remain unbroken, without a fracture through the bodies of the vertebræ."

Other surgeons, however, have affirmed that the vertebræ may be luxated. After pointing out, in his Treatise on Diseases of the Joints, the circumstances which render this occurrence very improbable, Rust affirms that even the lumbar and dorsal vertebræ may be dislocated, and refers to instances recorded by various writers.§ He mentions the following as a case of dislocation in the cervical region of the spine, successfully replaced by himself:—"The injury was produced by a severe fall on the head. The neck was completely bent to the right side, the upper extremities already paralysed, and repeated attacks of convulsions and hiccough came on. Replacement was immediately attempted, and succeeded. I made the patient sit on the ground, and had the head drawn straight upwards by a strong assistant. The patient got well under the employment of cold locally.[*]

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* Tome iv. chap. iv. article iv.

† Précis Elémentaire des Maladies reputées Chirurgicales, tome iii. p. 42.

‡ Treatise on Dislocations and on Fractures of the Joints. First edition, p. 539.

§ Arthro-kakologie, p. 71.

Mr. Bell mentions a case of complete dislocation between the last dorsal and first lumbar vertebra, with entire division of the spinal cord. A small portion of bone was broken off. He gives two views of the parts.[†]

The greater mobility of the individual bones, the comparative smallness of their bodies, and the obliquity of the articular processes, point out the cervical vertebræ as those most likely to be luxated: at the same time the form of the neck, and its connexion with the head, are favorable to the application of such violence as may cause luxation. Hence not only does dislocation of the atlas occasionally occur, but we have also instances of luxated articular processes in the case of the five inferior cervical vertebræ. Baron Boyer even considers that this may happen without external violence, and that the inferior articular process of a cervical vertebra may be carried in front of the superior articular process of the vertebra below it, by a sudden and forcible rotation of the head and neck, towards the opposite side. He says that "Desault mentioned in his Lectures the case of an advocate, who met with this kind of dislocation by turning his head suddenly round to see who was coming in at a door situated behind his seat. Chopart also showed us a young man, twenty-four years old, in whom a similar accident had occurred, in consequence of an extreme rotation of the head, leaving the head permanently inclined upon the left shoulder."[‡]

Baron Boyer mentions another instance, which Desault used to relate in his Lectures, of a child, eight or nine years old, who, in turning heels over head on a bed, luxated the right lower articular process of a cervical vertebra. The head was turned towards the left shoulder, and so firmly fixed that it could not be brought into its natural position, even by the employment of considerable force. When the proposal of attempting reduction was made, Desault decidedly discountenanced it.[§] Another case of a child terminated fatally, under the employment of efforts at reduction; and, when the body was examined, one of the inferior articular processes of a cervical vertebra was found dislocated forwards.[‖] It does not appear that Baron Boyer had ever ascertained the existence of this dislocation by actual examination, and it is even doubtful whether he had ever seen a case at all. Further, he admits that no example can be adduced of both articular processes being dislocated at the same time.

Sir A. Cooper[¶] says that he has never seen a dislocation of the cervical vertebræ: he does not deny the possibility of the occurrence, but seems hardly to believe it.

In the anatomical museum at St. Bartholomew's Hospital there are specimens of luxated cervical vertebræ. In one of these the right inferior articular process of the fifth vertebra is dislocated forwards. The portion of the vertebral column above the seat of the injury is twisted to the left, and the body of the fifth, having been partially displaced, projects beyond that of the sixth vertebra. This displacement could not have been effected without laceration, or considerable injury of the fibro-cartilage. The upper and anterior part of the body, both of the sixth and seventh vertebræ, has been slightly fractured on the left side, without detachment of the broken portion. It appears as if a small piece of the edge had been broken off by the twisting of the spine to the left. As the specimen, which is dried and inclosed in a bottle, has not been completely cleaned of the soft parts, the exact nature and extent of the fracture cannot be ascertained; nor can it be pronounced with perfect certainty that there is no fracture of the processes. For the same reason, we cannot now make out the precise degree and kind of injury sustained by the fibro-cartilage.

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[*] Medicinisch-chirurgische Zeitung, 1813, vol. iii. p. 127.

[†] On Injuries to the Spine and Thigh-bone, p. 25. Plate ii. fig. 2 and 3.

[‡] P. 114. [§] P. 117. [‖] P. 118.

[¶] On Dislocations, p. 539.

In another, the inferior articular processes of the fifth cervical vertebra are partially separated from those of the sixth, having been drawn upwards; but they have not been thrown forwards. The bodies of the same vertebræ are partially separated behind, but they preserve their natural level and relative position in front. The connexions of the two vertebræ must have been torn by a force applied behind, bending the neck powerfully forwards, and the bones must have subsequently resumed their natural position, so that there would have been no pressure on the spinal marrow. This kind of injury has been called, by Mr. Bell, Diastasis, or sub-luxation.

A third specimen exhibits a dislocation of the sixth upon the seventh cervical vertebra. The inferior articular processes of the sixth are completely displaced forwards, and its body projects over that of the seventh. The spinous processes have been sawn out, so that it is uncertain whether they were injured or no. This may be deemed a case of complete dislocation; but there is an appearance of fracture near the basis of the articular process, the exact nature of which cannot be ascertained in the present state of the specimen. Mr. Stanley considers that this fissure was made by the saw in removing the spinous processes.

Cure of Nasal Polypi.—Dr. **Primus**, of Babenhausen, asserts that the saffronised tincture of opium (of the Prussian Pharmacopœia) possesses the property of gradually destroying nasal polypi, when applied to them. Certain cures, which have been thus effected, have already been published, and a striking case occurred in January 1826. A man, forty-six years of age, had one in each nostril. The tincture was applied several times a day to the bases of the polypi, by means of a small hair-brush or lint roll. In eight days the tumors had assumed a paler appearance, and lost a little in volume; a serous secretion from the nose, which had existed for a long time, was diminished, and the pituitary membrane had acquired a more lively tint, as if in a sub-inflammatory state. The application was continued, the tumors continued to decrease, and at the end of three weeks had entirely disappeared. (*Mediz. Chirurg. Zeitung.*)

Cold Water as a Remedy in severe Salivation.—We have received a letter from Dr. **Andrew Haynes**, of Vicksburgh, Warren County, Mississippi, recommending the application of cold water to arrest severe salivation. He writes that he has witnessed "the most decided and prompt abatement of the swelling and inflammatory symptoms in several cases, from pouring a gallon of cold water gently on the head and neck." "In cases," says he, "where gangrene was to be apprehended from the severity of the inflammation, I have prescribed the cold water to be repeated every three hours, or oftener, with decided advantage."

We have no experience with the remedy in such cases: it is a well-known fact, however, that cold and moisture are powerful agents in developing the mercurial action, and it will be remarkable if further experience should confirm its power to arrest its progress. The late Professor RUSH, in the yellow fever that prevailed in this city, in many cases where mercury failed to affect the system, and in which it was important that this should be speedily affected, applied to the neck of the patient cloths wet with cold water, and generally with the desired result: indeed, sometimes the most profuse salivation was produced in an exceeding short period. (*Philadelphia Journal.*)

BARTON'S *new Operation for Anchylosis.*—Dr. Barton was kind enough to bring his patient to us today (July 20th), that we might examine him. The motions of the new joint are more extensive than they were when we last saw him. He flexes his thigh on the pelvis more than he could, perhaps to an angle of about 120°: of course, when sitting, he is still obliged to bend his spine. The motions of the joint appear to give him no pain; he walks with a short stick, and without limping much. He walked several times across the room without the aid even of his stick, but limped a good deal in doing so. He went up and down a flight of steps, with the aid of his short stick only, with great ease. His two limbs are nearly of the same length, but, when standing, the side of the pelvis over the affected limb is somewhat elevated. When his legs are crossed, and his feet close to one another, he stands firm, and appears to bear an equal portion of his weight on each limb; but when his feet are together, with his legs parallel, he bears his weight principally on the sound (left) limb, and the pelvis of the right side appears elevated.

He informed us that a few days since he walked from his residence to the hospital and back again, a distance of three miles. Occasionally, he amuses himself with his gun, and Dr. Barton was shown, on a recent visit to him, a number of birds that he had shot. After using much exertion, he (Coyle) says that he suffers from general fatigue, but does not experience pain in the new joint. The operation must be considered as eminently successful, and is highly creditable to the boldness, ingenuity, and skill of the operator. (*Ibid.*)

Syphilis and Phagedena.—The following distinctions between these are made by Mr. WELBANK:—

Syphilis in general is first observed at a more remote period from sexual intercourse than other venereal diseases. It commences in some point of inflammation, which is soon characterised by abrupt induration. It proceeds, sooner or later, to indolent and uniform ulceration of the surface, between which and the edge there is no undermining groove of separation. The inguinal glands are little, and often not at all, disturbed by the absorption of the virus, even when secondary diseases have already manifested themselves.

The secondary diseases of syphilis arise in the series noted by Mr. Hunter, attacking first the skin and throat, and then deeper-seated parts. They are ushered in by a soft and much accelerated pulse, without any other obvious febrile symptom, and by severe nocturnal pains. They are indolent, and slow of progress. They consist of an eruption of firm and slightly elevated spots, from which pellicles or scales are from the commencement successively detached. These spots are thick about the scalp, chin, forehead, and upper and inner part of the thighs. In situations where there is hair, they frequently form slightly elevated crusts of a pale colour. When they appear on the palms of the hand or soles of the feet, they are characterised by a thick honeycomb desquamation of the dense cuticle. They are more disposed to superficial ulceration, when confluent or situated between opposed and secreting surfaces, as the angles of the mouth, scrotum and thigh, the nates, or between the toes. The ulceration of the tonsil is attended with little pain at first, and excavates the part affected deeply and often in a triangular form, as if the tonsil were split. This ulceration slowly acquires, especially on the supervention of simple excitement, a smooth buffy surface. Syphilitic nodes are a late symptom, and appear in the form of a painful but chronic enlargement of the bone affected. Syphilis is a rare disease, and is in every form directly superseded *pro tempore* by the excitement of mercurial irritation. It is long intractably stationary, or even progressive in most cases, unless mercury or sarsaparilla be employed.

Phagedena may arise spontaneously in cachectic habits, either in its primary or secondary forms. Sometimes it is first noticed many months after sexual intercourse, sometimes on the day following; it exhibits in general a rapid inflammatory ulceration, succeeding to pustule, extensive excoriation or fissure of surface. Frequently there is puriform discharge from the urethra. This is often recorded, under the name of Gonorrhœa, as the cause of secondary diseases. It is, however, in many cases only a concomitant mark of a certain cachectic constitution. It sometimes first appears contemporaneously with the supposed secondary diseases, sometimes three or four weeks after primary ulceration of the genitals. Sometimes it recurs many months after supposed cure, in conjunction with eruptive diseases. It differs both in progress and cure from simple gonorrhœa, and may have appeared ten or twelve times in one patient, from constitutional liability. Primary phagedenic ulcerations are various and multiform, and do not always exhibit a continued disposition to extend themselves. They in general spread at their edges, in parts or the whole of their circumference, and are characterised by considerable tumefaction of cellular tissue, and frequently phymosis. Natural processes of reparation in milder forms of the disease quickly follow those of destruction. The secretions in phagedenic ulceration are, for the most part, sanious or purulent, and ordinarily profuse. The inguinal and other absorbent glands become subject in many cases to rapid enlargement and suppuration. These affections of the absorbents often arise when the exciting sores are healing or have healed.

The constitutional diseases of phagedena are frequently coexistent, and even simultaneous, in their origin with those termed primary. They do not attack different structures in any regular series, and even nodes are contemporaneous with cutaneous and other diseases, or even precede them. Some of them often exist in an active state, with little disturbance of the circulation, and are generally characterised by rapid or sudden local inflammations. The affections of the skin consist of distinct purplish or brownish spots, with or without elevation, of a thick, papular, vesicular, and pustular eruption on the trunk and extremities, the three forms being generally conjoined. These eruptions are not found on the palms of the hands and soles of the feet, and exhibit an appearance of desquamation on their decline only. Sometimes there are distinct superficial tubercles slightly vesicating, or large phlyzaceous pustules forming crusts. When the phagedenic virus attacks the cellular tissue, it causes deep red and much elevated tubercles, of various sizes and furunculous character, the larger of which often exhibit a considerable extent of phlegmonous inflammation. A superficial and rapid ulceration of phagedenic character exposes the sloughy cellular tissue, which leaves a deep cavity on its separation. Frequently may be noticed a combined affection of the skin and cellular tissue, attended with superficial ulceration, which extends at its edge, while it heals in its centre, forming an islet or peninsula of skin. These sores, which are frequently covered with prominent crusts of rupia, resemble in shape the base of the horse's foot, and leave a white depressed cicatrix, circular or oval, and very characteristic of phagedenic ulceration. Sometimes large patches of integument become red and indurated, and subsequently ulcerate superficially into many circular, oval, and crescentic sores. These are especially frequent about the carpus and tarsus, and round the elbow, ankle, and wrist joints, and on the thigh and calf of the leg. The phagedenic ulcerations of the throat and fauces suddenly occupy a considerable space, exhibit often a shreddy irregular surface, and a bright red and everted edge. Sometimes the phagedenic process is limited to the mucous membrane, which is grooved out by the advancing edge, while processes of reparation are visible in the parts first affected. Suddenly suppurating inflammation occurs, even at early periods, about and beneath the periosteum of various bones, particularly of the cranium, nose, and tibiæ, and about the carpus and tarsus; this symptom being more generally observed where mercury is indiscreetly employed. Intense and agonising pain attacks the external parts of the head, in many cases. With the eruptions of the skin is often joined iritis. Inflammation and ulceration of the larynx, enlargement of the testicles, effusion into the joints, especially of the knee, and phagedenic ulceration about the lacrymal sac and eyelids, may be added to this long catalogue of disease; and sometimes there exists extensive herpetic ulceration of the skin of the face and forehead. This affection often destroys in its progress the alæ and septum of the nose.

Mercury administered so as to affect the circulating system is superfluous in the milder symptoms, and exasperates generally the more severe. Even when apparently yielding to an increased action of mercury, the maladies suddenly relapse, and are often protracted in their duration. The disposition of many of the milder forms of this disease to processes of natural cure and reparation, is a frequent source of error in estimating the utility of mercury, and even the more severe forms are in some instances, for a time, superseded by pushing, as it is termed, a mercurial course. Each relapse, however, of disease, especially in its more formidable shapes, is aggravated in severity proportionably to the disturbance of the constitution unnecessarily induced by such injurious treatment, till at length an irremediable state of disease is established. Iritis is the only affection in which the risk of irreparable injury by delaying the use of mercury, counterbalances the almost certain evil of administering it so as materially to disturb the circulating system. (*Medico-Chirurgical Transactions.*)

Amputation of the Thigh at the Hip-joint, by Mr. ORTON.—Having made the necessary arrangements, with Mr. Oldknow on my right hand, and Mr. Attenborough on my left, and standing on the right side of the patient, an assistant forcibly brought down the thigh, which was previously drawn up close to the abdomen, when I carefully cut down to, and passed a strong ligature round, the femoral artery, about two inches below Poupart's ligament. That being done, I plunged a long double-edged catlin directly through the upper part of the thigh, in a direction downwards as the patient lay on his back, the point entering close by the neck of the os femoris, and coming out near the tuberosity of the ischium, and, cutting downwards about two-thirds of the whole length of the thigh, keeping the knife close to the bone, I brought it out in a somewhat slanting direction; thus forming, by one incision of the muscles on the inside of the thigh, a large fleshy flap, which was immediately grasped by Mr. C. Attenborough. Then, changing the knife for a scalpel, I laid open the joint to as great an extent as I could, and the assistants forcibly abducting the thigh, so as to thrust the head of the bone forwards, I succeeded in dividing the ligamentum rotundum without difficulty. The capsular ligament being, however, as yet only divided on the inside, I resumed the long knife, intending to have passed it between the head of the bone and the acetabulum, and by holding the point directly downwards as when the first thrust was made, to have cut through the muscles and integuments from within outwards. But not being able to get the knife through the joint in that manner, I was obliged instantly to change my purpose, and carrying the handle of the knife downwards and outwards, cut through the integuments and muscles all round, from the acetabulum in front, directly above the trochanter major, down to the tuberosity of the ischium below. I had then only to divide the capsular ligament on the outside of the joint, together with the tendons inserted into the hollow behind the trochanter, and the limb was severed from the body.

Mr. Attenborough immediately placed his other hand over the middle of the wound, to prevent hemorrhage there; whilst Mr. Oldknow and myself began to secure the vessels with ligatures as quickly as possible, beginning with those on the outside of the joint, proceeding then to those about the acetabulum, which had been compressed by Mr. Attenborough's left hand, and lastly to those of the large flap, which had been held in his right. But little blood was lost, and one-third of that came from the femoral vein. About a dozen ligatures were found necessary.

On examining the wound, there were found two large sinuses extending into the muscles covering the dorsum ilii, where matter had lodged; but they were not cut out, nor was any thing done to them; nor was the cartilage, &c. about the acetabulum pared off. The vessels being secured by ligatures, and the wound simply cleansed, the large flap was brought over the wound, which it covered exceedingly well, and was secured, first by about half a dozen ligatures, and then by straps of adhesive plaster; after which, a double-headed roller was applied, and the poor fellow put to bed as well as could have been expected.

A state of syncope occurred early in the operation; but one of the gentlemen, who kindly took charge of him while we were engaged with the limb, gave him a little wine occasionally, as he seemed to require it, and he passed through it very fairly. (*Ibid.*)

The patient recovered after a very tedious convalescence.

MIDWIFERY.

Parturition.—Upon a few occasions, Dr. MERRIMAN has known the period of delivery, dated from the last appearance of the catamenia, has exceeded forty-four weeks, or 308 days; and we subjoin a short detail of these anomalous cases.

1. Mrs. I. had in ten pregnancies borne eleven children: she had on all these occasions become pregnant almost immediately after the monthly intermission. She was regular in March 1813, and had no appearance after the 7th instant. She was led to believe that she conceived on the 8th, and made preparations for her confinement in the early part of the following December. Her labour did not take place till the 11th of January, 1814, making 309 days, not including the day of supposed conception, since the disappearance of the catamenia.

The child, a boy, when born, was larger than most, if not than any, of her former children, and her labour was of several hours' longer duration. She was once pregnant afterwards, but this pregnancy presented nothing unusual.

I have always been inclined to think that in this case gestation was protracted beyond the usual term of forty weeks. The lady was a woman of great modesty and good sense, and free from every sort of affectation. She could have had no motive for fixing upon the 8th of March as the time of conception, but a firm conviction that she was right in her calculation; and neither the time of quickening nor any other circumstance induced her to suspect that she had formed an erroneous opinion.

It has indeed been assumed respecting this case, that the lady did not conceive on the 8th of March, but much later in the interval of freedom from menstruation: namely, only just before the next recurrence of the period. Ought this assumption to be admitted as decisive against the opinion of the lady herself? She had formed her opinion after the experience of ten pregnancies, in all of which she calculated from the same premises, and her reckoning had proved correct; and in a subsequent pregnancy, calculating in the same way, she again formed a correct opinion. The assumption rests altogether upon the hypothesis that in this one particular the usual course of nature cannot be deviated from, though we have evidence *ad infinitum* that the course of nature in every other point relative to conception, gestation, and parturition, is continually interrupted and deranged. But let us grant what is assumed, that the conception did not take place till "the day preceding the next menstruation," will this clear up the difficulty? The catamenia had ceased on the 7th of March: according to the laws of nature, as contended for by those who make this assumption, the catamenia, unless arrested by conception, ought to have returned at the end of twenty-eight days, consequently on the 4th of April, but they did not return on that day; and therefore, according to this hypothesis, the conception must have been complete on the 3d of April, which gives, to the 11th of January following, 283 days; and demonstrates that the longest period of pregnancy which the objectors allow to be possible was exceeded by three days.

2. Mrs. N. had lain-in of one child, and the number of days which elapsed on that occasion between the catamenial intermission and the labour was 303. Mrs. N. was unwell in November 1822; she recovered on the 15th, and

had not the slightest appearance afterwards. Her labour took place on the 5th of October, 323 days from the day of intermission.

It should be remarked, that Mrs. N. is of a very nervous temperament, and has always been irregular in her periods of menstruation. The child was large, but not larger than might have been expected from a mother who is herself above the usual size of females. This case, therefore, though exhibiting so considerable a deviation from the usual course of pregnancy, cannot be adduced as satisfactory evidence of protracted gestation.

3. Mrs. B., upwards of forty years of age, who had not borne a child for more than nine years, was unwell in March 1823. As there was no appearance of the catamenia in April, nor the following months, she comforted herself with the hope that the critical change in her life had been happily effected. After some considerable time, however, she began to enlarge in size, and, fearing that some disease was forming, she consulted the late Mr. Chevalier, who probably supposed that her complaint was ovarian.

The enlargement continuing to increase, she was recommended to procure the advice of an accoucheur, and in consequence applied to me. On hearing the history of the case, and being positively assured that there had been no appearance of the catamenia for more than twelve months, there was no reason to suspect pregnancy, and I concluded, therefore, that the enlargement was occasioned by an ovarian tumor. When, however, I had other opportunities of seeing Mrs. B., and was permitted to make an examination per vaginam, it became evident that pregnancy was considerably advanced, and in nine or ten weeks afterwards (viz. September 27, 1824,) she was delivered of a very stout healthy boy.

CHEMISTRY.

On the Iron contained in the Blood.—Mr. Englehart has shown that when an aqueous solution of the colouring matter of the blood is treated with chlorine, it is decomposed; a flocculent substance is deposited, which is insoluble in water, and which, when separated by the filter, yields all the iron of the colouring matter, by treating it with the commonly employed re-agents.

Mons. H. Rose, has repeated and verified the experiments of Englehart. He found, however, that the iron precipitated by ammonia contains a small quantity of phosphate of lime and subphosphate of iron, and also that if excess of ammonia be added without separating the flocculent matter, it is re-dissolved; the liquid becomes of a deep brownish-red colour, and the iron does not precipitate. After a long time it is indeed true that flocculent matter is deposited, but it contains scarcely any iron, almost the whole of it remaining in the ammoniacal solution. It appears, therefore, that the red colouring matter and the flocculent matter derived from its decomposition by chlorine, possess the property of hindering the precipitation of the iron by the alkalies; indeed, a considerable quantity of solution of iron may be added to the colouring matter, without its being precipitated by the alkalies. If the colouring matter be destroyed by chlorine, and the insoluble matter be separated, all the iron may be precipitated by re-agents; but this is not the case if the insoluble matter be left in it. There is however a limit to these facts; for when the iron is in too great proportion to the colouring matter, the iron is then partly precipitated.

M. Rose found that when the serum of human blood, or of the ox or sheep, was mixed with a considerable quantity of solution of iron, it presented the action of the usual re-agents upon the metal. Ammonia and the other alkalies, although added in great excess, produced no precipitate: they even re-dissolved that occasioned by the addition of albumen to a solution of peroxide of iron; and neither hydrosulphuret of ammonia, nor tincture of galls, occasions any precipitation in the solution.

In general, peroxide of iron and other oxides are not precipitable by alkalies, when an organic substance soluble in water is added to the solutions, provided it be of such a nature as to be entirely decomposable at a high temperature. On the contrary, when an organic substance soluble in water is totally or mostly volatilized without decomposition, it does not prevent the iron from being precipitated by the alkalies. The first effect is produced in a hot solution of gelatine or starch, in gum arabic, linseed, mucilage, sugar, sugar of starch and of diabetes; the pectic, kinic, malic, citric, and tartaric acids; in fact, this last acid has long been known to produce this effect. The contrary property was found in the following acids; viz. the oxalic, acetic, formic, pyro-tartaric, pyro-citric, pyro-mucic, succinic, benzoic, &c., and by alcohol and sulphuric ether.—*Annales de Chimie et de Physique.*

New Alkali in Hemlock.—Professor FICINUS, of Dresden, has discovered a new alkali in the Æthusa Cynapium (Linn.) to which he has given the name of Cynopia. It is crystallizable, and soluble in water and alcohol, but not in ether. The crystals are in the form of a rhombic prism, which is also that of the crystals of the sulphate. (HENSMAN's *Repertoire.*)

MISCELLANEOUS.

Paper to resist Humidity.—This process, which is due to M. ENGLE, consists in plunging unsized paper once or twice into a clear solution of mastic in oil of turpentine, and drying it by a gentle heat. The paper, without becoming transparent, has all the properties of writing paper, and may be used for the same purposes. It is especially recommended for passports, workmen's books, legal papers, &c. When preserved for years, it is free from injury, either by humidity, mice, or insects. It is further added, that a solution of caoutchouc will produce even a still better effect. (*Kunst und Gewerbe-blatte.*)

Indelible Writing Ink.—Let a saturated solution of indigo and madder in boiling water be made in such proportion as to give a purple tint; add to it from one-sixth to one-eighth of its weight of sulphuric acid, according to the thickness and strength of the paper to be used: this makes an ink which flows pretty freely from the pen, and when writing which has been executed with it is exposed to a considerable, but gradual, heat from the fire, it becomes completely black, the letters being burnt in and charred by the action of the sulphuric acid. If the acid has not been used in sufficient quantity to destroy the texture of the paper, and reduce it to the state of tinder, the colour may be discharged by the oxymuriatic and oxalic acids, and their compounds, though not without great difficulty. When the full proportion of acid has been employed, a little crumbling and rubbing of the paper reduces the carbonaceous matter of the letters to powder; but, by putting a black ground behind them, they may be preserved, and thus a species of indelible writing ink is procured, (for the letters are, in a manner, stamped out of the paper,) which might be useful for some purposes, perhaps for the signature of bank-notes. (*Journal of Science.*)

Proceedings against Empirics in Edward the VI.'s Reign.—In this king's reign, several practisers of physic were examined by the College, and found so unfit for the practice of that art, that they were rejected; others were punished according to public statutes, and others fined.

In the fourth year of the king's reign, in the month of September, one Grig, a poulterer, of Surrey, taken among the people for a prophet, in curing of divers diseases by words and prayers, and saying he would take no money, &c. was, by command of the Earl of Warwick, and others of the council, set on a scaffold in the town of Croydon, in Surrey, with a paper on his breast, wherein was written his deceitful and hypocritical dealings; and after that, on the 8th of September, set on a pillory in Southwark, being then our Lady Fair there kept; and the mayor of London, with his brethren the aldermen, riding through the fair, the said Grig asked them and all the citizens forgiveness.

"Of the like counterfeit physician, saith Stow, have I noted (in the Summary of my Chronicles, anno 1382,) to be set on horse-back, his face to the horse-tail, the same tail in his hand as a bridle, a collar of jordans about his neck, a whetstone on his breast, and so led through the city of London, with ringing of basons, and banished." (GOODALL's *History of the College of Physicians.*)

Medical Report during Lady Jane Seymour's Illness.—She was married to Henry VIII. the day after Ann Boleyn's execution. Seventeen months afterwards she fell in labour, and was delivered of a living son on the 12th of Oct. 1537. She was alive on the 17th. The Herald's Office dates her death on the 24th Oct. The following is the report of her six physicians:—"These shall be to advertise your lordship of the queen's estate. Yesterday afternoon she had a natural *laxe*, by reason whereof she began somewhat to lighten, and, as it appeared, to amend, and so continued till towards night. All this night she hath been very sick, and doth rather appaire than amend. Her confessor hath been with her grace this morning, and hath done all that to his office appertaineth, and even now is prepaiing to minister to her grace the sacrament of unction. At Hampton Court, this Wednesday morning, at eight of the clock." (TURNER's *Life of Henry VIII.*)

INTELLIGENCE.

MONTHLY REPORT OF PREVALENT DISEASES.

DURING the last month, we have had the usual routine of Rheumatism, Dyspepsia, and Winter Cough, but without any thing deserving of particular notice.

The Physicians' intended Petition to the Legislature.—IT has been determined that a petition shall be presented to Parliament, early in the ensuing session, on the part of the Doctors of Medicine of the United Kingdom, Graduates of the Scotch and other Universities, with a view of engaging the legislature to emancipate the profession from the shackles which have for centuries been so illegally and unjustly imposed on it by the arrogated professional monopoly of the College of Physicians in London; of which petition the following is an outline:—

1. It is essential to the national welfare that his Majesty's subjects be supplied with medical attendance, of excellence commensurate with the improved state of science, and avouched by competent testimonials.

2. To effect these objects, it is necessary that the profession of physic be so organised as to insure adequate qualifications on the part of practitioners, and afterwards to secure, to individuals so qualified, full power to exercise their talents, in the way most conducive to the public good and to their own interests.

3. On this account, it is incumbent on the legislature to establish, by law, such an arrangement of the profession, in its several branches, as shall insure that all who profess the practice of the art possess the necessary qualifications.

4. The supply of medical aid being left free to accommodate itself to the demand, the welfare of the profession requires that its different branches be protected, both from unqualified intrusion and from unnecessary restrictions.

5. To enable your honorable House to judge of the alterations required for this profession, it appears necessary to inquire into the nature of the divisions of its different branches,—the relative proportion of their numbers to each other, and to the population, in this, as compared with other nations,—as well as the causes and effects of these divisions and proportions respectively.

6. That a feeling very generally prevails that serious grievances do exist in the medical profession, is placed in evidence by the following facts, either officially before your honorable House or otherwise notorious:—Last year it was resolved by the surgeon-apothecaries, or general practitioners, that a petition be presented to Parliament, praying for an inquiry into the existing state of medicine and surgery, so far as regards the general practitioner, &c. It was about the same period resolved, by the members of the surgical profession, that a petition be presented to the House of Commons, for a committee to inquire into the abuses of the College of Surgeons, &c.; and your petitioners now humbly state their grounds for respectfully soliciting a revision of all the laws which regard the several branches of the profession, particularly the physicians' department, and also the laws by which the College of Physicians of London are, or profess to be, governed.

7. Your petitioners presume the more earnestly to solicit the attention of your honorable House to those circumstances, from having observed the hazard of legislating for any single department of a collective profession, without special reference to the interests of all its branches, as well as of the community at large. As an instance in point, they might mention the unsuitable powers unwarily granted to the Society of Apothecaries, by the Act of 1815.

8. Your petitioners now come to their more immediate object, of submitting to your honorable House a general view of the grievances under which

the profession and the public labour, as connected with the organization of their own department, which abounds in evils urgently calling for legislative remedy.

9. Upwards of three centuries ago, the physicians of London were constituted a corporation, or college (unum Corpus et Communitas perpetua, sive Collegium perpetuum), principally for the purposes of "restraining and suppressing illiterate, unexperienced, and unlicensed practisers;" to which association were granted all the usual rights and privileges which royal charters confer.

10. It would be well if the spirit, or even the letter, of this charter had been regarded by those who administered its powers; but, unhappily, the course of proceeding adopted by this body, from its earliest formation, has set at naught the laws under which they were to be governed; and, by arbitrary and illegal by-laws, they have superseded the authority of the statutes, introducing practices to which these statutes afford no sanction,—excluding a large portion of the profession from rights to which the charter and statutes give them claim,—creating distinctions utterly at variance with all that the law enjoins,—and so limiting the College, as, without any legal authority whatever, to exclude from its pale all who do not derive their qualifications from the medical degree of Oxford or Cambridge.

11. Were this power even conferred by statute, it would, at the present day, be an oppression as absurd as it is unjust; for, in the course of events, other medical schools in Britain have risen to an eminence far surpassing what Oxford or Cambridge could ever boast of; and the law, if it existed, would present the solecism of conferring the highest medical honours upon those who least deserved them: nay, of wholly limiting them to this favored few; all other physicians, however eminent or capable, being absolutely excluded.

12. These regulations operate with peculiar severity and injustice on physicians of the catholic and dissenting persuasions, who are, under all circumstances, excluded from the fellowship.

13. The law, however, gives no such power; for your petitioners seek in vain, either in the charter or statutes, for any grounds on which the proceedings pursued by this College can be justified.

14. So entirely has the reputed College of Physicians departed from the legal authorities from which it springs, that the whole discipline of the College, and even its very denomination, differ essentially from what the law has directed; so that, were the present College required to prove its identity with that of Henry VIII., your petitioners are persuaded they would be unable to establish the fact.

15. In the whole course of proceeding followed by this College, your petitioners can discern no motive having for its object the public good, or the advantage of the profession; its unvarying tendency being to establish within the profession an odious monopoly,—giving rank exclusively to those who can show no claim to professional superiority; attempting to make the largest portion of British physicians outcasts and aliens in their own country; and, by the influence of these signal abuses, degrading the whole profession, and exposing it to the encroachments which the subordinate departments have so successfully made on it.

16. Of these encroachments, however glaring, your petitioners mean not

to complain, nor do they seek protection from them in any exclusive rights or privileges.

17. Your petitioners, however, do seek relief from the unjust and illegal restrictions imposed on them by the College of Physicians, so as to enable them to enter into professional competition with an equal chance of maintaining their own title to public approval.

18. The abuses which, for the advantage, real or imaginary, of a very few individuals, have thus existed for centuries in the higher branch of this profession appear now to have approached the highest degree of which they are susceptible: preventing the public from having a free choice of their physicians; greatly augmenting the expences incidental to sickness; preventing physicians, with the exception of the favored few, from aspiring, with any chance of success, to offices of dignity or emolument; impeding the progress of science, and infringing upon the rights of the universities.

19. The grounds of all the foregoing assertions your petitioners are prepared to prove, and they trust that, in what they have averred, a sufficient apology is furnished for the present appeal, and a sufficient cause shown why your honorable House should take this most important and long-neglected subject under your early and mature consideration.

20. What precise reforms of the profession may be called for, your petitioners presume not now to mention; they merely submit, most respectfully, to your honorable House, that great amendment is needed in every part of the British dominions. They solicit only inquiry into the defects and abuses of which they complain, and they rely with confidence on your honorable House for granting them, as the result of that inquiry, such relief as your honorable House, in its wisdom, may deem meet.

21. Your petitioners venture only to suggest, that a parliamentary committee of inquiry would, in their opinion, be the most effectual means of eliciting and verifying the necessary information; and they respectfully submit that the importance of the subject, whether as it regards the welfare of the public or the interests of an useful and much aggrieved profession, fully entitles it to the grave examination which they solicit.

And your petitioners, &c.

All physicians, whether in town or country, who may approve the principles here set forth, and desire to contribute their efforts towards obtaining the objects sought, are requested to communicate their sentiments, without delay, to the Faculty of Physic in London, (post free,) to the care of Messrs. T. and G. Underwood, 32, Fleet-street; Messrs. Callow and Wilson, Princes-street, Soho; or Messrs. Burgess and Hill, Great Windmill-street, Piccadilly. And it is further most earnestly requested, that they take an early opportunity of making the members of parliament, magistrates, and other influential persons in their respective neighbourhoods, acquainted with the real bearings of the important questions at issue, which have recently undergone such full and able discussion in the Medical and other Journals of the metropolis, as to have been rendered perspicuous to all who have had an opportunity of attending sufficiently to the subject. For the convenience of those who may wish to suggest improvements, the paragraphs of the proposed petition are numbered.

MONTHLY LIST OF MEDICAL BOOKS.

[No Books can be entered on this List except a copy be sent for the purpose; the titles of works having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.]

Observations on the Properties and Effects of the expressed Oil of the Seed of Croton Tiglium; together with the Botanical History, and a correct coloured Engraving, of the Plant. By **John Frost**, F.S.A. F.L.S. F.H.S. &c. —8vo. London, 1827.

A Manual of Surgical Anatomy, by **H. M. Edwards**, D.M.P. Translated, with Notes, by **William Coulson**, Demonstrator of Anatomy at the Medical School, Aldersgate-street.—12mo. London, 1827.

An Essay on Gout: in which its actual Predisponent, Proximate, and Exciting Causes are clearly defined; and its Preventive and Curative Indications fully demonstrated, upon new Pathological Principles. By **P. P. P. Myddelton**, M.D. &c.—8vo. Fourth Edition. Bath, 1827.

A Preliminary Dissertation, illustrative of a new System of Pulmonary Pathology, supported by a Series of conclusive Physiological Experiments: combining a rational Theory with a successful Method of conducting the Cure of Consumption. By **P. P. P. Myddelton**, M.D. &c.—8vo. Bath, 1825.

METEOROLOGICAL JOURNAL,

From November 20th, to December 20th, 1827.

By Messrs. **Harris** and Co. Mathematical Instrument Makers, 50, High Holborn.

November	Rain gauge.	Moon.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	*9 a.m.*	*2 p.m.*	*10 p.m.*
20			46	50	41	29.96	29.97	100	93	W	NW	Fair	Fair	Fair
21	Rain gauge frozen.		42	43	29	30.08	30.02	86	84	NE	NNE	—	—	—
22			30	36	25	29.77	29.65	83	86	N	NNW	—	—	Snow
23			26	36	27	29.55	29.51	86	89	NW	N	—	—	Fair
24			30	34	28	29.67	29.88	88	88	N	N	—	—	Snow
25		☽	33	39	37	29.83	30.21	96	98	WSW	WSW	—	Rain	Cloudy
26			42	45	34	30 20	30.25	98	100	WSW	W	Foggy	Cloudy	Sleet
27			34	45	34	30.22	30.12	100	98	W	SW	—	—	Fine
28			36	45	41	29.92	29.70	98	87	SW	S	Cloudy	—	Cloudy
29			44	48	43	29.24	29.88	100	98	NW	NW	Rain	—	Fair
30			46	51	47	29.36	29.35	96	98	NW	S	Fair	—	Cloudy
Dec.														
1			48	53	44	29.01	28.96	86	87	WSW	WNW	Cloudy	—	Sleet
2			45	47	43	29.00	29.27	90	96	NW	ENE	—	Sleet	—
3		○	45	48	44	29.55	29.71	96	86	ENE	W	—	Fair	Cloudy
4			50	56	49	29.66	29.71	97	98	W	WNW	—	—	—
5			51	56	47	29.95	29.73	95	96	W	W	—	—	—
6			47	49	36	29 68	30.00	80	85	WNW	NW	—	—	—
7			39	50	45	30.14	29.80	90	85	WNW	NW	—	—	—
8			46	47	35	29.77	29.86	88	90	NW	NW	Fair	—	Fair
9			40	55	51	29.79	29.55	90	98	W	NW	—	—	Sleet
10			54	55	45	29.36	29.24	98	98	SW	SW	Cloudy	Sleet	—
11		☾	45	53	41	29.39	29.30	86	93	WSW	SW	—	Cloudy	Cloudy
12			44	46	42	29.25	29.21	97	100	ESE	SE	DenseF.	—	Rain
13			42	45	39	29.37	29.57	97	90	WNW	SW	Cloudy	—	Cloudy
14			44	52	43	29.35	29.34	92	98	SSW	W	Rain	Rain	—
15			47	55	44	29.57	29.46	98	98	WSW	SW	Fair	—	Rain
16			44	51	38	29.62	29.92	92	90	W	WNW	—	—	Fine
17			42	49	48	30.08	29.96	90	90	W	WSW	—	Fair	Fair
18		●	51	55	49	29.68	29.57	97	98	WSW	WSW	Rain	—	Rain
19			53	55	46	29.49	29.46	98	98	WSW	WSW	—	Rain	—

NOTICES.

We have received the Communications of Mr. Lyons, Mr. Gore, Mr. Fergusson, *and* Mr. Selwyn.

Mr. G. *will perceive that we received the volumes.*

THE LONDON
Medical and Physical Journal.

No. 348, VOL. LIX.] FEBRUARY, 1828. [No. 20, *New Series.*

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL PAPERS,
AND
CASES OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER AUTHENTIC SOURCES.

CATARACT.

On the Varieties of Cataract; their Causes, Formation, and Cure.

By S. J. STRATFORD, Assistant Surgeon 72d Highlanders.

A GREAT difference of opinion still existing in the minds of the profession respecting the causes and formation of cataract, I have been led, from a variety of circumstances, to pay particular attention to this disease; so that I trust the following observations may be deemed worthy of consideration: they may appear novel, but I hope they will be fully supported by future observation and experience.

To comprehend the nature of cataract, we must have a correct idea of the anatomical structure and formation of the parts concerned: we must attend particularly to the connexion between the lens and its capsule, and have a just conception of the minute, delicate, and transparent tissue by which the lens is held in connexion with life and the animal economy; and, if we pay due attention to its natural and healthy condition, we shall be better able to comprehend and appreciate the varieties of its diseases. I shall, therefore, pass briefly in review the anatomical structure of the lens and its capsule, conceiving that it will the better lead us to understand this disease.

The crystalline lens is that transparent body placed upon the anterior surface of the vitreous humor, imbedded as it were in its substance; it is covered and surrounded by a beautifully transparent capsule, which serves to retain it in its proper situation; we observe that the lens is doubly convex, and that in its posterior surface this is much more marked than in its anterior. The lens is formed by very thin concentric lamellæ, superposed upon each other, increasing in density, and finally surrounding a harder nucleus. The more external layers are soft, and easily removed, but the nearer we approach the centre these become more condensed and firm in their texture: as a necessary consequence of this formation, we find the centre considerably thicker than the circumference. The component parts of the lens, chemically examined, seem to consist principally of albumen and gelatine, with traces of several neutral salts; it is firmly coagulated by boiling, or the action of acids. A fact curious in the formation of the lens is, that by the action of heat it is separated into thin equal divisions: this is the separation of its fibrous texture, and no proof of its muscularity, as was imagined by the ingenious Dr. Younge. The lens is contained in its proper capsule, a thin transparent membrane, which is firmly connected to the surrounding textures. This capsule is described by some anatomists to be formed by a splitting of the external membrane of the vitreous humor; but this would form a lamina so very thin, that it would not be strong enough to confine the lens in its situation, but would be ruptured by every motion of the globe. Moreover, if we compare the relative density of this membrane with the capsule, we shall find the capsule considerably thicker than the membrane, especially when it approaches the lens, which must at once convince us of the fallacy of such a conclusion. The capsule undoubtedly is a distinct membrane, firmly connected, and surrounded by the adjoining textures. It is strengthened and supported on the fore part by a reflection of the tunica Jacobi, which, having surrounded the proper matter of the nerve, is continued forward, comes in apposition with, and is connected to, the posterior surface of the ciliary processes and external layer of the hyaloid membrane. At a short distance, however, from the capsule of the lens, this membrane separates from the vitreous humor, and, proceeding forwards, is reflected over the capsule of the lens, firmly adhering to it, and serving to keep it in its proper situation; while the outer layer of the hyaloid membrane is situated behind, and, being closely united to it, assists to fix it in its position. Between the adhesion of the tunica Jacobi to the hyaloid membrane and its reflection over the capsule of the lens, we find a cavity denominated the canal of Petit, or, by the French, canal Godronné; this being regularly crossed by little transparent fibres (in all probability, serous arteries and veins,) passing from the union of these membranes to the capsule of the lens, serving to bind down the former tissue at certain intervals; so that, if we open into this cavity, and inflate it by means of a blowpipe, the air passes easily around the capsule of the lens, and elevates the tunica Jacobi at equal distances, forming a kind of crown, having the lens contained in its capsule for the centre. Within the capsule we find a minute quantity of fluid, which surrounds the lens, and is called the liquor Morgagni, which in all probability is to fill out the capsule, and permit the motion of the lens in the adjustment of the eye to near and distant vision: this fluid must be secreted by the inner surface of the capsule.

It has been said that the lens is not supplied with blood-vessels; that it is only a deposition from the liquor Morgagni by which it is surrounded. That this is not the fact, I am convinced; and I am sure I shall be supported by every rational and thinking mind; for, as the lens is formed by an infinite wisdom for a particular and useful purpose, so must it be supplied with vessels which nourish and connect it with the general system, supporting it in that combination of actions which is a proof of its vitality, and even of its existence as a part of the animal frame. As a positive proof, in the healthy eye we find it perfectly transparent; but, when separated from its connexions, it soon becomes opaque, and is then absorbed: this must convince us that it possesses life, and therefore has vessels circulating through it, by which this life is supported. These vessels pass, I believe, (although I cannot positively demonstrate the fact,) from the capsule to the circumference of the lens, taking their course through the liquor Morgagni, and carrying a perfectly transparent fluid: so minute indeed are they, that they may be ruptured by a blow on the eye, when they leave the lens as a foreign body, similar to what anatomists would have us to believe was its natural condition. The vessels which supply the capsule of the lens I have often seen ramifying on its surface in the living eye during disease: in their natural condition, however, they are perfectly invisible, being minute serous twigs from the arteria centralis retinæ. The arteria centralis retinæ, having supplied the retina and arrived at the ciliary processes, inosculates freely with the short ciliary arteries, and going forward as serous vessels through the canal of Petit, and by their adhesions causing the roseated appearance already mentioned, they give out minute serous twigs to the membranes forming this canal, while their chief branches go on to supply the capsule of the lens, and even the lens itself: besides these, the twig that passes through the centre of the vitreous humor is finally distributed on that part of the hyaloid membrane which strengthens and supports the posterior part of the capsule of the lens.

In this delicate system of vessels, there must be some which act the part of arteries, conveying and depositing the materials which compose the lens; while again there must be others, which absorb and remove that which has become effete and useless; for it is under this tenure only that the lens can possess life, and form a part of the animal frame.

The uses of the human lens would appear to be similar to the optician's, but it is much more perfect in its construction: it is evidently placed behind the pupil to refract and concentrate the rays of light, so that they impinge with due precision upon the sensible retina, the more essential portion of the organ of vision.

Having thus spoken of the formation of the lens and its capsule, I come to the consideration of the varieties of cataract, which essentially consist in an opacity of the lens, its anterior or posterior capsule, either of which may be separately affected, or all be combined in the same eye. When they are obvious to our sight, they are marked by distinct appearances that seldom or never fail us in our diagnosis.

As a general rule, we may say that an opacity of the anterior capsule is known by its dull white appearance, which something resembles common tissue paper;—an opacity of the lens only is marked by its shining surface, which is perceived to be the thin transparent capsule still covering the opacity;—and when the posterior capsule only is affected, it takes on a dirty white appearance, and by a practised eye is soon distinguished, from its evident depth of situation. These means of diagnosis will generally serve us, but they will be met with under a great variety of different circumstances, which must be minutely known to enable us to form a correct distinction of the situation of the disease.

The immediate causes of the formation of cataract have long been involved in much obscurity, but, by carefully tracing each variety of the disease from its source, and comparing the several causes and effects, I trust I shall be able to point out on what cause each may depend, which will greatly simplify the description, at the same time that it points out the kind of operation which ought to be used in the cure of these different varieties.

Inflammation is undoubtedly one of the causes of cataract: it may be either acute or chronic, and, with respect to its effect, either complete or partial. When cataract is a consequence of the acute variety, it is always complete; that is, both the lens and capsule have participated in the disease, and have become wholly opaque. This opacity is caused by a deposition of coagulable lymph within their previously transparent tissues: with this we frequently find a closed and permanently contracted pupil, for the most part adhering to the capsule of the lens. This condition of the parts prevents our seeing the peculiarities of the disease; but when the iris is not implicated, or but very partially, in the complaint, we shall observe a dense opaque capsule, which sometimes contains a somewhat enlarged lens. The opaque capsule has the dull white appearance noticed above, which particularly distinguishes it from a lenticular opacity; while, if the lens is enlarged, or there is a greater secretion of the liquor Morgagni, the posterior chamber of the aqueous humor is abolished, the iris sluggish in its actions, and presenting a black mark around its pupillary margin, which is most distinctly seen in a blue eye: this is formed by an eversion of the uvea, or pigment, on the posterior surface of the iris, pushed forward by the increased size of the lens. Sometimes even the iris is pushed out of its position by an enlarged and protruding lens; so that, if the pupil was previously contracted, upon the first application of the belladonna, it becomes largely and permanently dilated, provided it has formed no previous adhesions. The lens has lost its transparency, but we cannot observe it through the morbidly thick and opaque capsule; but, when we come to operate upon it, we shall find that it is not much firmer or harder than the natural structure; a circumstance of very material consideration in the choice of our operation. If any adhesion has taken place between the uvea and capsule of the lens, the application of the belladonna may rupture their connexions, and leave a considerable portion of the pigment adhering to the capsule: this forms a variety of the complaint that has been denominated the Cataracta Choroidalis. The acute progress of the disease is marked by all the symptoms of internal inflammation, such as considerable vascularity of the sclerotic coat, pain in the eye and temple, while generally more or less affection of the iris is present. The effusion of lymph into the transparent tissues is so sudden, that we are seldom able to mark the progress of the disease but by its ultimate effect.

The inflammatory action may be chronic, when the opacity will be more or less complete, according to the intensity or duration of the disease. This morbid action, which I have ventured to designate by the term Chronic Inflammation, generally takes its course slowly, without much pain, so that in some cases it does not rouse the attention or exert the fears of our patient. Sometimes, however, very soon after the commencement of the disease, he finds that objects appear indistinct, and, if examined with attention, they seem covered with a mist, or as though he looked through a glass that had been breathed upon; while, at night, the candle appears to have a halo or brim around its flame. These, indeed, are some of the most distinctive marks of incipient opacity in some of the transparent media: they cannot possibly be confounded with disease or insensibility of the optic nerve; for this always presents to the imagination a dark spot, or general deficiency in the power of vision. If we now apply the belladonna so as to dilate the pupil, (which should be an invariable practice, so that we may observe all the peculiarities of the complaint before we pretend to form our judgment of its kind,) the patient will be better able to distinguish objects, from the dilated pupil admitting more of the rays of light to fall upon the retina. The same effect occurs in the evening or a dark day, which is a symptom that would strongly confirm our suspicions of the nature of the disease, even before we recognise an opacity; while, if the disease is in the nervous texture, sight is best in a good light. These symptoms, I imagine, rather indicate an increase in the density of the fluid circulating in the transparent media; but, should the morbid action go on to the deposition of lymph, it soon becomes visible, upon examination of the pupil. Should the disease subside or be diminished by proper remedies, the lymph may again be absorbed; but, should it become organised, the opacity will be permanent. As the disease proceeds, a number of spots, or opacities, will be observed in the pupil, at regular distances, around the circumference. Sometimes we may perceive two sets,—one in the anterior capsule, more white and distinct; the second of a yellowish muddy colour, marking, by the obvious depth of its situation, that its seat is in the posterior capsule. At this time, too, we may frequently see several triangular-shaped stripes, that often take on an appearance like mother-of-pearl, or, if more opaque, look like spermaceti when broken across; and, should these striæ become completely opaque, they form the striated Capsular Cataract. These striæ almost always pass from the circumference to the centre; which peculiarity may, perhaps, be accounted for by the manner in which the vessels pass to the supply of the part. When the disease has arrived at this point, it may remain stationary for years; or, if it go on, it may become complete, the capsule being entirely opaque, as marked by its dull white colour. Before the disease, however, has arrived at this extent, we may observe the lens to put on a bluish white colour, which is more marked in the centre than the circumference, while the partially opaque capsule is evidently seen stretched over it: this by degrees becomes more opaque, but it is generally soon hid from our observation by the dense opacity of the capsule. If at this period we cut up the lens, we shall generally find it of its natural consistency, though in some few instances it may have become harder and rather firm, which, when in situ, is marked by its assuming a darker tint, deeper situated than the capsular opacity; and, if it should become enlarged, it will encroach upon the posterior chamber of the aqueous humor.

I have noticed that the opacity may be partial and remain stationary in the anterior capsule; the same may occur in the posterior, which, as I remarked, is particularly known by its yellowish muddy-white appearance, more or less dense according to the intensity of the disease. It may commence either in the centre or at the circumference, when it takes the form of striæ, which, if carefully examined, may be observed to have a concave shape, evidently (to an eye practised in the observation of these diseases) deeper seated than the lens.

It will, perhaps, be correct here to notice that I have, in several instances, observed opacities evidently deeper seated than the last variety of these diseases: these, I think, may be correctly referred to an opacity in the vitreous humor, which might mislead an inexperienced person with respect to their immediate seat.

Besides the symptoms already mentioned as attending chronic inflammation of the lens and capsule, we shall generally find that there is a greater determination of blood to the eye than usual; and this is especially evident after an examination of the organ. Many distended veins will be seen ramifying in the conjunctiva, while a slight pink-coloured halo surrounds the margin of the cornea; and often the eye is much more irritable than usual.

There is another variety of morbid action producing cataract, much more difficult to understand than the preceding: this always commences in the lens itself, is never observed but in old people, and would seem to be the product of a chronic action bearing some analogy, but evidently differing from the preceding varieties. It is always slow in its progress; so that, when the opacity first commences, the patient experiences the same indistinctness of vision as is mentioned in the foregoing variety: he has the same cloud before the eye, and observes a similar halo around the flame of the candle. The iris commonly acts with freedom, but the pupil is generally dilated, from the diminution of the number of the rays of light that pass through the only partially transparent lens. If we examine the dilated pupil, we soon observe that the lens is of a greyish amber or yellowish colour, more dark at the centre than at the circumference, which obviously depends upon the varied thickness of the body; and, if the lens only is affected, it has a fine polished surface. As the disease increases, the patient becomes more or less blind, and the lens assumes a darker colour, verging from yellow to a natural brown. Soon after this, we generally observe that the capsule begins to participate in the disease: at first it is but very slightly affected; the lymph is deposited in its texture, it takes on a dotted or variegated appearance, which has sometimes been compared to the white veins of some kinds of marble, and from this circumstance it has been denominated the Cataracta Marmorata. As the affection increases, so the capsule becomes more opaque, and in time perfectly obscures the hard lens, so that at this period we may be deceived in the nature and consistency of the cataract. The only points that will assist our diagnosis is the age of our patient, and the commencement of a similar disease in one of his eyes; for this complaint is not often confined to one eye, although it is seldom equally forward in both. The lens, we find upon an operation, is seldom larger than natural, but it is always observed to be considerably harder: this varies with the depth of its colour, which forms an excellent criterion of its consistency. When we examine it after the operation of extraction, we find that its centre nucleus bears a relative proportion to the general texture of the lens, so that, while the circumference is hard and firm, this has in some instances been said to equal bone in the density of its texture. The capsule, too, in the latter stage of the disease, is always much more tough than natural, is perfectly white in its colour, and opaque in its consistence, so that it effectually obscures the hard lens.

There is still another variety of cataract, obviously differing from any of the preceding; it occurs in all ages, while it is most frequently seen in the infant's eye, and is commonly known under the appellation of Congenital Cataract. In the commencement of this disease, (if we are so fortunate as to meet with a case,) we may observe that the lens at first presents a bluish white opacity, still covered by its shining capsule. If we watch its progress, we find the lens gradually becomes perfectly opaque and quite white, but from its colour is obviously soft; after a time its capsule is dotted with opacities, or we may observe streaks upon its surface of the dull white colour before mentioned: these increasing, the opacity becomes general, and now we frequently observe that it contains a fluid, which is of different degrees of density; so that, by attentive observation in the pupil largely dilated with belladonna, we can see, if the eye be kept quiet for a time, that the more white and dense particles have subsided, and now occupy the lower margin of the pupil; but, upon the first motion of the ball, they are again mixed in the general mass, and the cataract assumes an equible appearance. This is the Milky Cataract of some authors. At this period the capsule is commonly swelled out, as may be known by its effects upon the iris: this generally continues for a short time, when its size again begins to diminish, and that appearance of the iris to subside; while soon it will be seen to become smaller than before, and we may sometimes observe a dark ring around its circumference, evidently not produced by the everted margin of the iris, but depending upon the collapsed state of the capsule, permitting the rays of light to pass between it and the ciliary processes, and bringing to view the dark choroid coat through the transparent vitreous humor. The iris now may sometimes appear to have a vacillating motion, dependent upon the loss of support which the containing membrane of the eyeball experiences upon the removal of the lens from its natural situation; for at this period the lens is almost entirely absorbed, so that it leaves but a thin scale, or perhaps but its original centre nucleus: even this, however, in time is removed, and the anterior lamina of the capsule retires upon the posterior, until approximated they seem to form but one membrane, perfectly opaque, white, and elastic: the Cataracta Arida Siliquosa of authors.

Nobody, having just ideas of the anatomy, can contemplate the progress of this disease without at once recognising cause and effect; and if, in the congenital variety, any doubt should still exist, we have but to reflect upon the cause and termination of that cataract, sometimes produced by a blow upon the eyeball, or a rupture of the capsule permitting the escape of the lens, to be convinced of the fact. Indeed, if we examine the eye after death, and observe with what facility the lens starts from its capsule, we may perhaps be able duly to appreciate the tensity of those vessels that form its connexion with the capsule; and then, if we see how easily the lens escapes, we must at once perceive how slight must be that concussion which will break through these vessels, and how they may be broken without the capsule being opened. Should the lens then be separated from the living body, it is dead; becomes a source of irritation, though still enveloped in its capsule, and in process of time will be absorbed. I think I may say, then, that this variety of cataract always arises from a blow upon the eyeball, a sudden concussion, or unusual pressure, that acts upon the part so as to rupture the vessels that support the life of the lens; for, when this occurs, the lens gradually becomes opaque, and, as a foreign body, produces a degree of irritation upon the inner surface of the capsule, and lymph is deposited; while an increased secretion of the liquor Morgagni also takes place. The vessels that deposit the lymph upon the capsule may sometimes be seen by the naked eye: at first it is laid down but partially, and only at certain points, which causes a spotted appearance. The lens now begins to dissolve in the liquor Morgagni, and is slowly absorbed with that fluid. Soon after this the capsule becomes wholly opaque, but still it is evidently swelled out by an increased secretion of the liquor Morgagni: this projection, however, decreases as that fluid, and the lens dissolved in it, is absorbed; and, when it is entirely removed, and the laminæ of the capsule have collapsed upon each other, (in the infant eye,) we may perceive the black rim around its circumference. This, I believe, is caused by the capsule not increasing in size (now the lens is removed) in proportion with the rest of the eye, so that it remains stationary, while the vitreous humor and ciliary processes are fully developed.

From observation, I am led to believe that this is the most frequent cause of congenital cataract; the Cataracta Centralis, as recorded by authors, may sometimes occur; but this will depend upon partial inflammation of the capsule. I have observed the common variety of congenital cataract to follow tedious labours, in which the frontal bones, at this period of life separated into two portions, may experience a compression; they may even collapse over each other; when the pressure must affect the globe, and may rupture the vessels of the lens.

On referring to M. Demour's work upon the Diseases of the Eye, I am happy to find that I am supported by so excellent an authority; for he precisely states, that "Si on veut reflechir attentivement a la structure du cristallin, a son esolement dans sa capsule, a la petite quantité de lymph, ou humeur de Morgagni, qui l'environne et a la nature de son envellope, ou expliquera aisement les phenomenes qui presente çette maladie pendent et après sa formation, toût medecin que reflechira attentivement a la structure du globe de l'œil, trouvera quelque soit alors le systême adopté pour expliquer la nutrition du cristallin, qui *l'interruption de cette nutrition est la cause immediate de la cataracte.*

"Les causes externes de la cataracte sont connues: les blessures qui entament la capsule de cristallin; les *percussions qui detruisent la circulation dans ces parties si delicates; en un mot, tout ce qui put changer les rapport du cristallin dans le globe detruisent sa transparence.*"

That this proceeding is the common process of congenital cataract, is also strongly corroborated by the opinions and observations of SAUNDERS and GIBSON; while their discrepancy of opinion may now be easily explained, by considering that they must have seen their patients at various periods, when different and distinct stages were present.

The cataract produced by a wound of the eye and a rupture of the capsule, with an escape of the lens, differs but little from that just noticed: it undergoes similar stages; the lens first becomes opaque, which commences immediately after it is separated from the capsule, and in a few days it is quite white; the capsule also is inflamed, and lymph is deposited on it; it becomes white, and in the end assumes the character of the coriaceous cataract.

By way of recapitulation, then, I think I shall be supported in considering that cataract may be caused—

1st. By acute inflammation of the lens and capsule.

2ndly. By chronic inflammation, for the most part beginning in the capsule of the lens.

3dly. A morbid action commencing in the lens itself.

4thly. By a rupture of the vessels which connect the lens with the capsule, and endow it with the principle of life.

5thly. By a rupture of the capsule and escape of the lens.

These varieties of disease will obviously require different operations for their cure. Cataract caused by acute inflammation of the lens and capsule should always be cut up with the needle, and left to the process of absorption for its removal. That produced by chronic inflammation should experience a similar treatment. The third variety, in its very commencement, should undergo the operation of reclination or depression; but in its latter stage, when it has become hard, even should it be enveloped in a tough capsule, ought to be extracted; for the hard lens almost invariably causes so much irritation, that glaucoma is a consequence of its presence in the eyeball after it is depressed. The fourth or fifth varieties, by their progress, point out that we have but to separate the diseased portions from the living system by means of the needle, when the absorbents will entirely remove them from the organ of vision, and hereby cure the disease.

BLACK VOMIT.

Observations on Black Vomit. By William Lyons, Staff Surgeon.

From my situation of principal medical officer in the island of Dominica, West Indies, and from the fatality of the fever of that island, my attention was given in a particular manner to the consideration of its phenomena. Black vomit, one of its most alarming symptoms, soon fell under consideration; and although I was soon enabled to convince myself of its identity with altered blood, from an attentive examination of that fluid when ejected from the stomach, and the state and contents of the stomach after death, and likewise from an examination of the liver and tubili biliferi, yet the hitherto inexplicable mutation of the blood's colour to black remained in its concealment.

The black colouring matter of this fluid was separated by filtration in the easiest manner, and its powerful acid qualities were proved by its active effervescence with alkalies, as well as by its action on the enamel of the patients' teeth, and by its powerfully ascescent smell: but it was not until I observed, in the examination of recruits at this station, that an immense quantity of muriatic acid is constantly secreted from the skin, with the insensible perspiration, that I brought to my mind Dr. Prout's discovery of this acid's being the principal one secreted in morbid conditions of the stomach, and with it the idea of ascertaining the effects of this acid upon the blood.

Having made the experiment of adding muriatic acid to blood, the colour of the blood was instantly altered to a deep black, and, when diluted with water, presented a liquid which I should have declared, from mere inspection, to be black vomit. This experiment has been tried by Dr. Hope, at my suggestion, and the results have been the same, even when the muriatic acid had been so far reduced with water as to be hardly capable of turning the edges of the teeth; and is supposed by Dr. Hope to be an interesting adaptation of Dr. Prout's discovery to the explanation of the symptom of black vomit.

I am persuaded that if these experiments, or rather facts, shall turn out to be a satisfactory manner of accounting for black vomit, that it will afford you pleasure; and the more so as the same facts may be fairly brought in explanation of malaria, &c.: it will also be an additional argument of the futility of urging that the black vomit is a symptom which predicates the contagious nature of the fever in which it is observed.

Whilst upon this subject, it may not be amiss to mention the successful treatment of a case of fever with black vomit, by the use of nitrate of silver and opium, immediately after the abstraction of a large quantity of blood, and those circumstances that led me to the use of the remedy.

In 1825, while in Canada, an epidemic catarrh prevailed amongst the inhabitants: in many of these cases, the bronchial affections were secondary to an ophthalmic attack, in which the conjunctiva was principally engaged. All the private practitioners used the usual mode of fomentation, blistering, and bleeding, without being successful. I alone had recourse, from the first commencement of the symptoms, to the use of nitrate of silver as an external application, with the happiest effects; and to this practice I was led by the opinion of my much respected friend, Dr. James Forbes. Purgatives and cupping were seldom required. From the magic-like effect of this remedy in dispelling the blood from the conjunctiva,—from the similarity of the catarrhal disposition noticed in this epidemic to something of the same kind of catarrhal epidemic in the West India fevers, where the gastric symptoms were most prominent, the idea struck me that the nitrate of silver, in conjunction with opium, might act powerfully in allaying the stomach affections; and with this intention it was given in the case of Mr. Cotton, clerk of the market at Dominica, long after the appearance of black vomit, and most certainly with the effect of stopping the vomiting for eight or ten hours before death.

Emboldened by the result, I proposed the remedy, in the case of an artillery man named Ewing, to Mr. M'Gibbon, assistant surgeon of the 35th, under whose immediate care the man was.

The plan of treatment was commenced under the following circumstances:—

A man of the name of Sweeny, belonging to the same corps, had been sent to hospital from the same barrack thirty-six hours before Ewing: this man having died perfectly yellow, and with the symptoms of black vomit, in twenty-four hours after admission, and his body opened in twelve hours after, we came from the dissection of Sweeny to the examination of the fluid which Ewing was throwing up; and, upon the comparison of the fluid taken from Sweeny's stomach with that ejected by Ewing, the identity was beyond the possibility of a doubt, and, under these impressions, all hopes of his recovery was in our minds out of the question. It was under these circumstances that I proposed that as much blood as could be abstracted should be removed, and that we should then administer nitrate of silver and opium.

Blood to the extent of about thirty-two ounces was forced from the arm; but, after the arm was tied up, and whilst we were abstracting blood, the vomiting recurred. In the mean time, the pills with nitrate of silver and opium were prepared, and administered; and from the first dose the vomiting ceased. They were continued for six or eight hours; and a dose of croton oil was then administered. He was convalescent the third or fourth day, and had no return of fever; although he continued languid for some weeks.

It will be seen that the nitrate of silver, in the foregoing case, was administered for the purpose of obtaining its stimulant and tonic powers solely, although it may have acted beneficially by its power of decomposing muriatic acid.

MIDWIFERY.

On the Spontaneous Evolution of the Fœtus.

By George Jewel, Esq.

When we reflect upon the revolving changes which the several branches of medical science have undergone through succeeding ages, none appear more conspicuous than those which appertain to midwifery. It is, indeed, a fact too palpable to be refuted, that hitherto its principles have neither been so stable or determinate as those which belong to medicine generally: a circumstance, it is fair to presume, attributable to its defective cultivation as a branch of the healing art. Midwifery, unfortunately, has been left, for a long series of years, entirely unprotected by the medical corporate bodies of this kingdom, and, as a natural result, it has never been fully appreciated by students and junior practitioners as an important branch of science. Indeed, it is scarcely exceeding the bounds of truth to say, that very many practitioners of the present day have become acquainted with the mechanical delivery of women in laborious parturition by experience only, and that experience sometimes too dearly bought, while the principles of the science have been left totally uncultivated, frequently unnoticed. If the opinion be correct that the principles of midwifery have been to a certain extent neglected, and it scarcely admits of doubt, it cannot excite surprise that many of the phenomena of parturition should pass disregarded.

The object of this communication is to draw the attention of practitioners to that peculiar condition of the fœtus which obtains in one species of what are termed preternatural labours, and to induce a further development of facts; for it is upon this alone the solid pyramid of science can be raised.

The records of medicine inform us that, among women in all ages, the function of parturition has been not unfrequently interrupted by the cross position of the infant. To convert the preternatural into a natural presentation, or, in other words, to bring the head of the child, when an arm presented, in apposition to the os uteri, must have been (to say the least of it) a very precarious mode of delivery; in fact, one which seldom could be crowned with success: and, if foiled in the attempt, cutting instruments were had recourse to, under all circumstances, and at any period of the labour, with which they mutilated the child, that it might be extracted piecemeal through the pelvis. In justice, however, it should be stated, that formerly the various conditions and capabilities of the uterine fibre was not well understood; and it is upon a knowledge of these that the success of obstetric medicine principally depends.

It had been remarked by some of the most eminent accoucheurs of this and other countries, that in some few cases where an upper extremity of the child was detected as the presenting part soon after the commencement of labour, the nature of the presentation became materially altered before the process was wholly accomplished. Dr. Denman was the first English physician who directed the attention of practitioners to this interesting phenomenon, and which he designated "the spontaneous evolution of the fœtus." The arm or shoulder, he imagined, sometimes presented, but, by the power of the natural efforts, the child turned upon its own axis, the nates ultimately became forced into the pelvic cavity, which compelled the part originally presenting to recede into the uterus. This explanation, however plausible it appeared to some, failed in proving satisfactory to others. Dr. Douglas ably combated the theoretical doctrines of Denman, while at the same time he illustrated his particular views of the subject by the publication of seven cases which had occurred under his own observation.

The two following cases which I have recently met with in my own practice, will prove strong corroborative testimony to the opinion that no spontaneous evolution of the fœtus ever takes place, but that the child, by the extraordinary exertion of the uterine power, is merely expelled in a doubled position.

Case II.—Mary Davey, ætat. thirty-six, residing in Turner's-court, St. Martin's-lane, a poor woman, of short stature, a delicate constitution, and arrived at the full period of utero-gestation, was seized with labour early in the morning of the 1st of June, 1826. On the subsequent day, in the evening, I was sent for by the midwife in attendance. Upon entering the chamber, I observed that the uterine power was exceedingly and most fearfully exerted; large drops of perspiration stood upon her forehead and neck, and there was scarcely a minute's interval between the pains. On making an examination per vaginam, I found the shoulder pressed into the inferior aperture of the pelvis, the ~~head~~ having dropped through the os externum. The idea of turning could not be for a moment entertained under existing circumstances, and I found, during a few forcible contractions of the uterus, that the body of the child had become so compressed into the lower division of the pelvis, that a portion of the thorax could be detected almost at the os externum.

Having waited a few minutes to reflect upon the best means I could adopt to meet the exigencies of the case, a pain of augmented severity came on, which caused the woman to scream violently. The midwife now, and as it appeared by design, raised the bedclothes, when I had an opportunity of ascertaining, by ocular demonstration, the precise mechanism of the labour. The arm had already passed through the external parts from the posterior part of the pelvis; by a forcible uterine contraction, the nates appeared, and during the same pain the whole body was expelled. It must be remarked, that the arm neither retracted nor changed its original position in any part of the process. The head was extracted without much difficulty, the child being dead.

The unfortunate subject of this case, whose constitution, as was before remarked, had been always weakly, died the following morning from exhaustion, the effect of the over-active uterine power, and great general disturbance of the system.

Upon an examination of the body, the space in the antero-posterior diameter of the pelvis was found not to exceed three and a half inches, although the child was of the usual size. These are circumstances which materially add to the interest of the case. The uterine parietes were softer than natural, and appeared of a dark gangrenous colour.

Case II.—The wife of a respectable tradesman, residing in the Waterloo-road, forty years of age, and of a robust constitution, was seized with the pains of parturition on Sunday morning, October the 21st, 1827, being the third labour. On my arrival at ten A.M. I found her standing on the floor, notwithstanding the uterus was contracting with extraordinary force every three or four minutes. At my request she immediately got into bed, and having made the usual examination, the right hand of the child was discovered at the os externum, the shoulder under the symphysis pubis. In this, as in the former case, the efforts of the uterus were most powerfully exerted, and I observed that, during the two subsequent pains, a portion of the chest of the fœtus had arrived at the external parts. I now resolved to confide (at least for a time) in the natural powers, and for the following reasons: first, from the parturient action being most excessively severe; secondly, the whole of the shoulder, and part of the thorax, were rapidly approximating to the os externum; and thirdly, the parts were relaxed and lubricated by a plentiful secretion of mucus. That I might not come to any erroneous conclusion regarding the mechanism of the case, I held the hand of the child loosely within my own, by which I was again enabled to perceive that, so far from the original presentation retracting, scarcely any movement whatever took place in it during the process.

Within twenty minutes from the first examination, the breech presented, and the child was expelled, as in the other instance, without artificial assistance.

It is necessary I should remark that the patient had only arrived at the eighth month of pregnancy, and the child was dead; a circumstance attributed to an accident which occurred about ten days previous to the coming on of labour. The mother did well.

In obstetrics, as in the practice of all the other branches of medicine, the interests of science and humanity demand from us a due attention to the capability and resources of nature; that we should investigate into, and be strict observers of, her operations; and that we should unite in drawing a line of demarcation between cases which require the scientific interference of art, and others which may be safely entrusted to the unaided exertion of the natural powers. Dr. Douglas, in his well known pamphlet, published in the year 1819, "the Spontaneous Evolution of the Fœtus," states his conviction that at least one-third "of all cases of cross births" ought not to be subjected to artificial turning. Now, if this belief, founded unquestionably on fact and observation, approaches in any degree to the truth, is it not somewhat extraordinary that so little attention has been paid to a subject which is of such vast importance to the science of obstetrics, and, as a natural consequence, to the best interests of society? After some practical attention to this interesting part of obstetric pathology, I have been led to the following conclusions, not without a hope of seeing them confirmed by the experience of others.

That when the arm and shoulder, together with a portion of the thorax, of the child are detected at the os externum,—

when the uterine vigour is most powerfully exerted, and the woman bears down involuntarily with all her strength,—when the parts are disposed to relax freely, there being a due secretion of mucus, and the mother has previously borne children, the practitioner should not interfere. To these may be superadded a healthy conformation of the pelvis, the full period of gestation not having arrived, and the child being dead. Under all the circumstances above mentioned, more particularly the concurrence of great uterine activity, a fair opportunity should be permitted for the accomplishment of labour by the natural powers alone. I cannot coincide with Dr. Denman's theory, "that a child of the common size, living or but lately dead, in such a state as to possess some degree of resilition, is the best calculated for expulsion in this manner." On the contrary, I am induced to believe that the resilition spoken of would materially contribute to the resistance opposed to the uterine power, and, instead of facilitating, would rather prove an additional obstruction to the accomplishment of the process. That when the arm of the child is protruded into the vagina, it never again recedes to make room for the nates or any other part, as imagined by Dr. Denman, and therefore that the young practitioner would be led into a practical error if he waited for its occurrence as a matter of course.

It is, however, much to be feared that such cases as I have detailed but rarely occur; at least, that they form a small portion only of what are commonly denominated preternatural labours, and, therefore, that, although the practitioner possesses a knowledge of the fact that occasionally, in presentations of the upper extremities, the process of labour is accomplished without the interference of art, yet, as it is not possible to calculate, with any degree of accuracy at the commencement of a case, upon its probable termination, so will it be judicious to turn and deliver as soon as the condition of the uterus will permit; and again, on the other hand, where procrastination has usurped the place of prompt measures,—when the arm is wedged in the pelvis, and the uterus is morbidly exerting its tonic contractions,—and the death of the infant is unquestionably marked,—to pursue a mode of treatment more compatible with the safety of the mother, in removing the arm, or by a further mutilation of the child, to enable the operator to bring it with greater facility through the pelvis.

24, *Sackville-street, Piccadilly; January* 2, 1828.

UTERINE HEMORRHAGE.

Case of Uterine Hemorrhage, terminating fatally.

By C. WALLER, Esq.

THE following case of fatal hemorrhage, to which I was summoned on the 5th January, is, I think, one of sufficient importance to be admitted on the pages of your Journal, as tending to strengthen a position which has hitherto been warmly opposed,—viz. that cases may and do occur, wherein the patient sinks from exhaustion, although the flooding has been permanently stopped by the tonic contraction of the uterus. Not having been present till near its termination, I must refer you to the inclosed letter, which was most obligingly furnished me by MR. BIRCH.

29, Charlotte-street, Bloomsbury-square;
January 6th, 1828.

DEAR SIR,—With reference to the case in which you were good enough to give me your assistance yesterday, I am very happy to make the statement you desire: and I beg you will make whatever use of it you may deem proper.

I was called to the poor woman by the gentleman in attendance upon her from the Finsbury Midwifery Institution, about half-past seven in the morning. I found her powers were then very much sunk by hemorrhage from the uterus, which had taken place at intervals for several days, and which had become gradually more profuse: her countenance was exsanguineous, her pulse very feeble and rapid; her extremities cold; and she was unwilling to move, to speak, or to be spoken to. There were no labour pains; the os uteri was about an inch and a half in diameter, thin and dilatable; the placenta was attached over it to every part of its circumference. Without much difficulty, I passed my hand through the os uteri, peeled off a part of the placenta from the surface of the uterus, passed my hand into its cavity, and brought down the feet of the child. There was considerable difficulty in extracting the head, which prevented the operation from being speedily accomplished. The pelvis was undoubtedly small, for the woman had given birth to five or six stillborn children, after tedious labours. Very little blood was lost during the turning of the child, and subsequent extraction of the placenta; but, little as it was, it and the operation proved sufficient to render the woman's state still more alarming: the extremities became colder, the pulse more feeble, and extreme restlessness, convulsive movements, and insensibility alternated with each other.

I sent to request my colleague, Dr. CONQUEST, would bring his apparatus for transfusion; but, unfortunately, when he arrived, it was found defective, the pipe was lost, and it was useless. In this dilemma, you politely consented to lend us your syringe and your assistance; but so much time had unavoidably been lost before your arrival, (nine A.M.) and so little had the most active employment of the ordinary remedies, brandy and laudanum, been able to effect for this poor woman, that, at the time you entered her miserable apartment, I certainly considered her in articulo mortis: the pulse was not to be felt at the wrist; the heart's action was a mere flutter; the extremities were perfectly cold; *the respiration had sunk to an occasional sigh;* the power of deglutition was gone; and she lay perfectly unconscious and motionless. Twice, sir, you know we injected a quantity of blood, (which you will be able to estimate, from knowing the capacity of your syringe,) into the median vein, without producing any apparent change in the woman's condition. Indeed, I am much mistaken if she were not already dead when the second injection was made.

It may be satisfactory to you, sir, if I (who do not profess to be an enthusiastic admirer of transfusion,) state my conviction that it would be unjust to draw any unfavorable opinion of it from this case, which at most can only tend to prove that it has not the power of raising to life the dying and the dead; the contrary of which position, if I mistake not, its most staunch friends have not ventured to advocate.

I am, sir, your most obedient humble servant,

WM. BIRCH.

C. WALLER, Esq. Bartholomew Close.

The quantity of blood injected was very trifling: the person from whom it was taken did not bleed very freely, and the urgency of the case demanded that no time should be lost. I therefore contented myself with half a syringe full, (about one ounce,) and repeated this as quickly as possible; but the patient had ceased to breathe before the syringe was introduced the second time: and indeed my firm conviction is, that the circulation was too far reduced to allow of the passage of the first ounce into the auricle. Strongly does this argue the necessity of our being upon the watch on these occasions, and not deferring the operation until the patient has arrived at the last gasp. The experiments of Dr. BLUNDELL prove that, although blood be injected *immediately* after the cessation of respiration, yet still the animal will not be recovered; and, in the case just related, although it could not perhaps be said to have completely ceased, yet it was performed very imperfectly; nor could I discover the action of the heart through the thoracic parietes.

The time *necessarily* lost before the operation was attempted, is much to be regretted; for I am thoroughly persuaded in my own mind, from what I have seen of transfusion, that, had the apparatus been perfect at the time Dr. Conquest arrived at the house, the transfused blood would have been impelled through the vessels, and the unfortunate female would have been at this moment another living example of the efficacy of the practice.

Let it not, however, be supposed that we are visionary enough to expect that success will *invariably* crown our exertions. Transfusion should be judged of in comparison with the other operations of surgery; and, should it be found to succeed equally with them, ought, in my opinion, to be as generally received. It should be borne in mind, too, that, in the present state of our knowledge, we only employ it in the most desperate cases.

Bartholomew Close; January 8*th*, 1828.

SMALL-POX.

Reply of MEDICUS *to* DR. GREGORY.

I HAVE just read, in your Number for this month, Dr. GREGORY's reply to what he is pleased to call my "animadversions" on his paper on Constitutional Inaptitude to Cow-Pox. As he is evidently somewhat out of temper with them, it does not appear to me, who am a man of peace, quite safe that I should at present expose myself to his critical wrath. To you, however, who so readily gave a place to my former observations, some acknowledgment, and a few additional remarks, are due. Should you think these worthy of the attention of your readers, they are at your and their service: but I deem it prudent, for this time at least, to preserve my incognito.

I shall not descend into the arena to "chop logic" with the learned Doctor; yet I may observe, *en passant,* that if there be, as he admits there is, a constitutional insusceptibility of small-pox,—*small-pox* which Dr. Jenner held to be the virulent and *contagious* form of the disease, my argument, *a fortiori*, was neither illogically nor irrationally applied to infer a like unsusceptibility of cow-pox, the mild and *non-contagious* variety. With this avowed view of the subject, I could not possibly "mean to say *pari ratione*," especially as I wished to speak intelligible language." I cannot pretend to follow out the Doctor in his "case reversed," nor yet his *illustration* of walking twenty miles and ten, lest, in the "palpable obscure" to which they lead, I might not merely "stumble" but stray; and here I would whisper gently in his ear, "Cave ne titubes mandataque frangas." This, I hope, he will take in friendly part, as an *argumentum ad hominem*.

If he be determined not to avail himself of his own experience, nor yet that of others who have gone before him, "Baron Dimsdale and the inoculators of the old school," he has certainly no fair claim on me for the information he requires; more particularly as he seems to impute to me the crime of being a young and unfledged "practitioner." To that heavy charge, at least, I can truly plead not guilty; and have only further to say of myself, that, whatever may be my other disqualifications, I trust I shall not be found among the number of those who, as they recede from youth, advance in obstinacy, and grow old in ignorance in spite of experience.

I do not mean to be driven by the multiplicity or variety of Dr. Gregory's questions from what I take to be the real point at issue. My short and hasty letter was called forth by Dr. Gregory's paper, which sought information respecting Dr. Jenner's opinions on a subject that I knew had been very fully and satisfactorily treated in his "Life." Dr. G.'s first questions, one and all, resolve themselves into a knowledge of the laws which regulate variola and variolæ vaccinæ. As I was well aware that Dr. Jenner's opinions on these topics were set forth in that work; and as I believed that Dr. Gregory had either not read it, or had examined its contents in a very cursory way, I referred him to three chapters. In these chapters I see the pathological phenomena illustrated in a very striking manner by the literary history; I see a great number of facts, which heretofore appeared discordant and inexplicable, elucidated with irrestible force; and all the plain, practical deductions of Jenner confirmed with a clearness of evidence which I have no doubt will ultimately be sufficient to put an end to all the blunders both in the theory and practice of vaccination which have thus far unfortunately prevailed.

Let Dr. Gregory read again the chapters already referred to, and see if he can find out any statements that are not supported by evidence, and have not a direct practical tendency. As he seems not yet to have made this examination, I will tell him what he may find in these chapters. In the first place, sir, he will discover that an eruptive disease, of a variolous nature, has been known to exist in man, and several of the inferior animals, from the earliest periods of authentic history. In the next place, it is proved that the epizootic disease, most clearly described as variola by competent witnesses, has been traced in England and in other parts of the world. In the third place, it has been rendered more than probable that the variolæ vaccinæ, as discovered by Jenner, are the local remains of the more violent epidemic. It is impossible here to bring forward all the proofs by which these points are sustained, but I do contend that they are made out with a degree of certainty that may fairly defy all attempts to gainsay them.

If Dr. Gregory demands "chapter and verse," let him look to pages 163 et seq. usque ad 206; then again to 237-239, 240, 241, 352. Indeed, nothing is more easy than to multiply references to almost every page of the three chapters mentioned. Now let us examine how these historical facts apply to the leading points in question. Dr. Jenner found an eruptive disease of the cows in Gloucestershire. This disease, when communicated to man, afforded protection from small-pox. From an attentive examination of its characters, he was led to believe that it was a mild variety of the small-pox, and he accordingly called it Variolæ Vaccinæ. The whole of his subsequent experience confirmed this opinion, and he contended that the same general laws which governed the variolæ were applicable to the variolæ vaccinæ. These doctrines, derived from attentive observation, are stated in the clearest and most emphatic manner in Dr. Baron's book.

But Dr. Gregory will most likely say, "my original questions are still unanswered." Speaking literally, it may be so; but logically and by direct inference, they assuredly are. The pathological facts led Dr. Jenner to the conclusions which we have seen. The historical evidence confirms these conclusions, and moreover throws a flood of light on the origin of cow-pox. Now, all this proves, first, that Dr. Jenner had accurately traced the laws of small-pox and of cow-pox; and, secondly, that his opinions have received a most striking confirmation from events which occurred anterior to his discovery, as well as those which have presented themselves since.

Here let us take another view of this matter. What was the object of Dr. Baron in undertaking the illustration of Dr. Jenner's opinions? Was it not to do the very thing which Dr. Gregory contends has been left undone? Did he not collect many facts which bore upon the literary as well as medical history of small-pox and of cow-pox? Did he not show that the peculiarities of each affection are best elucidated by combining the examination of their pathological character with their literary history? (See his Introduction, page 14.) Did he not prove that Dr. Jenner, in investigating the properties of the variolæ vaccinæ, was guided by his knowledge of the laws which regulate small-pox? Did he not also prove that difficulties, which at first sight appeared insurmountable, were overcome by this very knowledge? (See pages 132, 133.) Did he not make it manifest, on a subsequent occasion, that the same knowledge enabled Dr. Jenner to explain the occasional causes of insecurity in the practice of vaccination? and that, as small-pox was known to have attacked the same individual twice, in like manner it might be expected at times to succeed cow-pox? (See page 278.) Did not all Dr. Jenner's writings, from the year 1799 downwards, show that he had anticipated the very questions which have now been put? Did he not, particularly in his second and third Treatises, endeavour to call the attention of his readers to some physiological facts respecting the nature of the small-pox infection, because he foresaw that they would eventually become connected with vaccination? Have not all these things been clearly announced in the Life of Dr. Jenner, and in his own published works? and will Dr. Gregory still say that he can find nothing that bears upon his first questions? Will he still say that Dr. Baron's views of the subject are speculative, and not strictly practical. For my own part, I, who am a practical man, can see nothing but what is practical in the beginning, in the middle, and in the end. The laws of the vaccine disease were deduced by Dr. Jenner from analogies drawn from the history of small-pox. The deviations in the former were illustrated by a reference to the same source, and many of the essential rules for its practice were derived therefrom. Was it a business of mere speculation to render all this manifest; and has it not all been incontestibly proved in Dr. B.'s book? Is not the illustration of the nature of small-pox and cow-pox the prominent object of Dr. Jenner and of his biographer throughout? As to the "constitutional inaptitude" to either of these affections, what would have been Dr. Jenner's answers to such questions as are put by Dr. Gregory? I have no doubt, both from his published writings and from the facts mentioned in his Life, that he would have replied to the following purport:—" My opinions respecting the variolæ vaccinæ were partly adopted, and ultimately confirmed, by my knowledge of the history of small-pox. I believe that both diseases are essentially the same. I know that small-pox infection will not render the constitution totally unsusceptible of that disease, and my opinion is that cow-pox, in the same way, may fail to protect. I likewise know that some constitutions resist small-pox contagion for many years, and afterwards imbibe it; others resist it altogether. The same thing is true with regard to cow-pox; and I have always considered both affections as governed by the same laws. For these opinions Dr.

Gregory may perhaps still demand "chapter and verse." If he does, he has only to read Dr. Jenner's publications, and to consult the passages already pointed out.

As to those individuals who enjoy "the inaptitude" to receive small-pox infection, it is manifestly impossible to calculate, either *a priori* or *a posteriori*, the ratio or the numbers, inasmuch as the same person has been well known to resist the infection even to a very late period of life, and afterwards to have had the disease in a malignant, nay even in a fatal, form.

It would, Mr. Editor, be happy for mankind if this "inaptitude," which now occupies Dr. Gregory's attention, were much more common than it is. In that case small-pox would be divested of many of its terrors, and Dr. Jenner's anxious and laborious investigations respecting its milder variety, the variolæ vaccinæ, would lose a great portion of their value. As to the inaptitude itself, it is manifestly an idiosyncracy, which has been long observed, and which is evidently incapable of being ascertained by any experience, whether individual or collective; because, as has been already remarked, it may and does exist at one period of life, and not at another. In some it possibly may continue through the whole of their lives; but of this we can never have full evidence previous to the close of each individual life.

MEDICUS.

January 5th, 1828.

STÓMACH AND INTESTINES.

Inquiries into the Healthy and Diseased Appearances of the Mucous Membrane of the Stomach and Intestines. By W. E. HORNER, M.D. adjunct Professor of Anatomy in the University of Pennsylvania. (Condensed from the *American Journal of the Medical Sciences.*)

THE want of some standard whereby the healthy and diseased appearances of the stomach and bowels may be distinguished, has been felt, perhaps, by all who have engaged in researches into the pathology of these organs. Though much has been written on the subject, yet the vagueness of the language used by authors, and more especially the great inaccuracy with which they employ the terms representing colours, have opened one of the most extensive fields for disputation in pathology.

In the numerous post-mortem examinations which I have made, both for myself and my professional friends, I have frequently found that the most opposite conclusions have been drawn from identical appearances in the organs under consideration; and there existed no available experience or authority, by which the correctness of these conclusions could be tested, and the truth determined. These circumstances induced me to institute a series of observations on the gastro-intestinal mucous membrane; and, by coincidences entirely accidental, I have been so fortunate as to obtain in a few months a description of information, that, in the ordinary current of events, might not have been acquired in years.

Three unsettled points present themselves in this inquiry:—1st. What is the healthy condition and appearance of the gastro-intestinal mucous membrane? 2d. What is its appearance in congestion from the agonies of dying? 3d. What is its appearance in genuine red inflammation?

It is necessary, in the commencement of this discussion, to settle the signification of the terms used: this I shall do, not in an arbitrary manner, but according to the meaning attached to them in conversation by some of the most sagacious and intelligent physicians of our city. I am forced to depend upon the inferences of conversation, because the definitions of Dictionaries do not decide; indeed, the terms are there used promiscuously. Thus, for example, Parr says that congestion is a swelling that gradually arises and slowly ripens, in opposition to that defluxion which is quickly formed and terminated. In the Dictionnaire des Sciences Medicales, congestion is defined to be a humoral collection which is formed slowly in some part of the body, increases gradually, and finishes by an intumescence of a variable size; the fluids which form it may be blood, serosity, pus, fat, bile, urine,—in one word, any of the fluids belonging to the body. It is thus evident that Parr alludes to the sub-inflammation of modern pathology, and that the other has no specific meaning. I now therefore state, that by *congestion* I mean an accumulation of red blood in any part or organ of the body, without irritation or mechanical violence; and by *red inflammation*, the accumulation of red blood which follows any local irritation.

I. *Of the Natural Colour of the Mucous Membranes.*

When an animal is bled to death, the stomach being empty, the mucous membrane of the latter, and of the intestines, is of a yellowish pearl colour, presenting at a short distance the lightest possible tint of pink; and few or no marks of blood exists, even in the large vessels under the peritoneal coat.

April, 1827.—At a butchery in Spring Garden, a sheep, which had fasted for twenty-four hours, was slaughtered in the usual way, by cutting the throat, and immediately afterwards dividing the spinal marrow in front between the occiput and first vertebra. As soon as life was extinguished, we examined the abdomen. The internal membrane of the stomach was of a pearl colour, slightly yellow, approaching to what artists call a light tint of bright brown; and the intestines were almost exactly like the stomach. Neither stomach nor intestines exhibited their blood-vessels, even of the largest size, except very faintly; and there were no red patches in either.

If an animal be killed with a full stomach, by puncture of the medulla spinalis at its commencement, the mucous coat of the stomach will retain on the surface, where the food was in contact with it, a light lake, approaching vermilion, from the detention of blood in its capillary system. The following experiment proved this:

June 1827, at the University.—A full-grown female rabbit, of the white kind, was fed upon green cabbage leaves. In about three hours afterwards she was killed, by pithing with a saddler's awl between the occiput and the first vertebra. Immediately upon the introduction of the instrument, the body was seized with a spasm, the extremities were drawn together and convulsed; the animal gaped two or three times, but there was no inspiration. In five minutes after pithing, the abdomen was opened: the circulation was found, by pressure upon the veins, to be going on but languidly in the parietes of the abdomen and in the abdominal viscera. I waited five minutes more, when it seemed to be completely stopped.

I then cut out the stomach, laid it open along its great curvature, and washed away with a stream of water its contents, which presented the appearance of having been well boiled and bruised. The food would have measured probably about an ounce, and was principally in the left half of the stomach: there was no hour-glass contraction of the latter. The mucous coat of the left half of the stomach was of a uniform light lake, approaching vermilion, without blotches or shades of difference, and firm; but the mucous coat of the right half was almost destitute of vessels or injection, and had the dull pearl colour of the stomachs of the sheep bled to death. The mucous coat of the small intestines was the same colour as the stomach, but much lighter.

The vermicular motion continued for ten or fifteen minutes in the intestines, after the abdomen was opened. I observed that the same occurred in the horns and body of the uterus, quite as clearly as in the intestines, and that it could be produced at pleasure by puncture, by clipping, and by stirring. On the uterus being slit open from one end to the other, it flattened itself out, and the internal surface corrugated precisely as in the small intestine. The capillary system of the liver bled freely half an hour after death, upon being punctured with the scissors.

From the great number of blood-vessels distributed through mucous membranes, they are, during life, of a very bright red colour, on many of the viscera, as the stomach, the small intestines, the lower end of the large, on the vagina and nose; in many other parts they are much less vascular, as in the lining membrane of the sinuses of the nose, in the bladder, and in the excretory ducts generally. The nostril and the vagina, in a robust healthy person, will probably be found to represent correctly the shade of colour which, in life, belongs naturally to the gastro-intestinal mucous coat.

Observation 1st. Living colour of healthy mucous coat of colon.—There is now a female in the surgical ward of the Philadelphia Alms-house, who suffered some time ago from prolapsus ani, which is said to have protruded about six inches: the protruded intestine sloughed off, as well as the sphincter ani and the adjoining integuments. This new state of the parts affords a distinct view of the internal coat of the colon, near the sigmoid flexure. The perineum has cicatrised and united to the end of the colon, but the surface is kept excoriated by the continued excrementitious discharges, from the want of a sphincter. In this patient, the mucous coat is of the colour of the vagina, or of a recently blistered surface of the true skin.

Observation 2d. Sudden death from ossification of the coronary arteries, exhibiting natural colour of gastro-intestinal mucous membrane.—July 17, 1827. Mr. W. J., aged fifty-five, of remarkably temperate, regular habits, for some years previous to his death was troubled with a shortness of breathing upon ascending a flight of stairs. His principal treatment was regularity and abstemiousness. Last night, about ten o'clock, just before he went to bed, he took, as was not unusual, a glass of cream, which he always considered to agree remarkably well with him. About four o'clock A.M. he was seized with extreme difficulty of breathing, complained of most violent pain in his loins, said he was dying, and in a short time expired. From the commencement to its termination, this attack occupied twenty minutes, during which his senses remained unimpaired. Dr. Edward Jenner Coxe was present; he found his pulse regular, but small.

At four o'clock this afternoon I examined him, assisted by Drs. Dewees and Coxe.

Abdomen.—Liver healthy. Spleen, coats of, interspersed with white patches, giving it a parti-coloured look; healthy in other respects.

Stomach middle sized; contained two ounces of mucus, some of which was loose, while the other formed a white transparent coat adhering to the sides, but which could be scraped off easily. Rugæ of mucous coat elevated, but not unusually so; whole internal surface of mucous coat on the summits and sides of rugæ of a very light, warm sienna, or bright brown colour, which was produced by innumerable microscopical points of red blood remaining in the capillaries. In the depressions between the rugæ, the stomach of a dull pearl colour.

The jejunum was of a deeper sienna, and of a more uniform tinge, than the stomach; contained feculent matter, consisting of mucus, yellow bile, and cream, all redûced to a homogeneous and digested mass. Its lacteals were distended with chyle, and were seen converging in their ramifications to the mesenteric trunks, which were also filled. The lacteals were not perceptible in the ileum.

The colon presented its mucous coat of a dull pearl colour, and contained soft healthy fæces adhering to its sides.

Peritoneum entirely and unexceptionably healthy.

We have now ascertained the colour of a healthy gastro-intestinal mucous coat, in death from hemorrhage after fasting; in death from puncture of medulla spinalis with a full stomach; in sudden death without the least probability of a diseased digestive apparatus, the stomach being empty; and finally in the living state. We shall next endeavour to ascertain the colour in Congestion.

II. *Colour of Mucous Membranes from Congestion.*

Our materials for elucidating the laws and phenomena of passive congestion are exceedingly imperfect and scanty. According to one writer,* congestion is the effect of torpor of habit, connected with an abstraction of stimulus, and is for the most part local. It is seldom accompanied with febrile irritation till it acts as an extraneous stimulus. Febrile motions may sometimes be the product of congestions;—congestions, depositions, or evacuations, are uniformly the product of febrile motions, that is, of irregular action. Dr. Armstrong has also written, indeed diffusely, on what he calls the congestive typhus fever, (p. 68—97;) but the cases which he has given in illustration of his views would seem rather to belong to diseases of irritation, than to passive congestion of the organs affected. He has also made some capital omissions in not giving us the laws of congestion,—in not saying a word about the state of the mucous coat of the stomach and bowels,—and in confining his attention almost exclusively to the liver, spleen, and brain.

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* Jackson on Fever; 1803, p. 197.

The congestion of red blood in any part of the body is commonly produced by an obstruction of one or more of the large venous trunks which return the blood to the heart. A ligature on the arm for the purpose of bleeding has this effect; garters worn too tightly, or indeed any other articles of dress which interfere with the return of blood, produce the same; lymphatic or aneurismal tumors situated near the junction of the extremities with the trunk of the body, also produce a congestion of blood in the parts beyond them, by pressing on the adjoining veins. Position will do the same, as throwing the head downwards and forwards in certain individuals who are corpulent and have short necks. Permitting a column of blood to remain too long on a part sometimes has this effect, as in standing or walking, which in certain persons is followed by a great accumulation of blood in the legs and feet. The general character, however, of all these cases of congestion is, that the congestion disappears the moment that the cause that produced it is removed. It very rarely happens that the capillaries and the larger veins are more than simply distended under such circumstances, and they quickly contract to their healthy diameters. It, however, occurs occasionally in pregnant women, near the term, to have some of the fine blood-vessels of the legs ruptured, in which case there follows an extravasation of blood in small bluish spots, about half an inch in diameter, and which, being a true ecchymosis, presents the same variations of colour, and is removed by the same process as the latter when caused by bleeding.

It is practicable to produce a congestion of the whole venous system, by obstructing the general circulation. If such obstruction be continued till the death of the individual, the phenomena of congestion are exhibited in swollen face, bulging eyes, blue lips, tumefied and red tongue, with purplish or red blotches on various parts of the surface of the body, but especially about the head, neck, and trunk. The most usual causes of such obstructions to the general circulation are asphyxia, from hanging, drowning, or irrespirable gases. The mucous membrane of the lungs wanting in this case the usual stimulus of atmospheric air, refuses passage to the blood from the ramifications of the pulmonary artery into those of the veins, and a complete arrest is thus put upon the general circulation. The lung becomes the seat of a congestion or engorgement in its capillary system, and all the mucous membranes of the body suffer in the same way.

Bichat's experiments* are quite conclusive on this point. He says, that in an animal in whose trachea a stop-cock has been fixed, if you draw out a portion of intestine and split it open, then close the stop-cock, in four or five minutes afterwards a dark brown colour will succeed to the red, which previously characterised the mucous surface of the gut; and the same change of colour will occur in a granulating surface under similar circumstances.

The lividity of the surface of the body, and of its mucous membranes, may be made to come and go at pleasure, by interrupting or restoring the freedom of respiration. The arrest of the capillary circulation is, however, not to be considered as a mechanical phenomenon, but a physiological one; for the animalization of the blood being somewhat affected or altered from the want of respiration, the sensibility of the capillary system is not properly excited by it, and therefore this system refuses to propel the blood. The blood in this respect may be compared to extraneous fluids, which, if they be injected into living blood-vessels, are found not to run so minutely as they do some time after death, when the vessels get into a passive state.† Parallel phenomena are common, and are well exhibited in the actions and sensibilities of many parts of the body. For example, the trachea, which is so large, yet closes immediately against the introduction of fluids which are unfit for respiration, as proved by Goodwin's experiments. The urethra, in a state of sexual excitement, will transmit the semen, but not the urine; the lacteals will readily absorb the nutritious parts of the chyle, but refuse the remainder, notwithstanding the equal fluidity of both. A moment's reflection will satisfy us that such powers of discrimination are indispensable to the operations of the system; for without them the several fine tubes of the human body, vascular, absorbent, and secretory, would be continually mixing their fluids in a manner inconsistent with life and its objects.

It is not improbable that several species of purpura, as the urticans, the senilis, and the hæmorrhagica, all of which seem to be an arrest of the red blood in patches in the true skin, or rete mucosum, have, in their pathology, a close connexion with the purple spots from asphyxia: that is to say, that there is a want of reciprocal sympathy between the red blood and the capillaries of the part, and therefore it is arrested in its passage through the latter. These spots may be distinguished from a common ecchymosis by their boundaries being well defined, and also by their deep, varying colour, which being sometimes lighter and sometimes darker alternately, show that the blood forming them, though arrested, is yet under the influence of animalization. The colour alternating is, however, not an invariable feature of this disease. I have lately met with a case of purpura hæmorrhagica at the Alms-house following an inflammation in the cellular substance on the front of the knee, and extending over the anterior semi-diameter of the leg from the knee to the foot, where there were no alternations of colour, and the disease disappeared like a common ecchymosis. I have subsequently seen it a prelude to mortification in the leg of a patient, Anthony Hartman, aged twenty-five, in the same institution. The patch which it formed surrounded almost the whole leg about its middle, in a band of five or six inches.

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* Anat. Gen. vol. i. p. 188. † Ib. vol. ii. p. 25.

In the more common cases of congestion, as the accumulation of blood is removed immediately upon the cause being withdrawn, so the organ of the body which has been the seat of it is quickly restored to its usual functions, and the disturbance which they have experienced readily disappears. If, however, the congestion be permitted to remain an undue length of time, the preponderance of the fluids will cause the congested part to inflame, and even to mortify, as in strangulated hernia.

The following dissection of a patient who died in the Alms-house will serve to illustrate the state of the stomach and bowels in congestion from a slow species of asphyxia, and to fill up partially the very wide gap in this part of physiology and pathology.

Observation 3d. Congestion of gastro-intestinal mucous coat.—W. T. ætat. thirty-seven, admitted June 8th, 1827; with abscess round cricoid cartilage; died June 10th.

Abdomen: System of vena portarum filled with blood, even in the fine intestinal branches, which were very conspicuous under peritoneum, so as to give a light purple colour to the whole of the intestinal canal; in places it was interspersed with mahogany coloured patches of two inches diameter. Colon externally was of a white pearl colour, contracted to three-eighths of an inch in diameter, and contained natural hard fæces. There were no fæces in small intestines, only flatus.

Along the whole anterior margin of the liver, a little above its edge, there was a white hard cicatrix of old condensed coagulating lymph, mixed at intervals with hepatic structure, by penetrating at various places from three to six lines into it. This terminated near the right end of the great lobe, by a depression, as if an abscess had once existed there. On cutting into the liver, near the cicatrix, many small miliary tubercles were found there, but they were not observed at more remote places.

Gall-bladder filled with healthy bile.

Spleen healthy, but completely surrounded by old adhesions.

Stomach, common size; of a pearl colour on peritoneal surface. Internal or mucous coat covered with mucus tinged with bile, corrugated, light pink colour generally; summit of rugæ, from accumulation in capillaries, appeared like red streaks, at the distance of six feet, from being covered with minute dots of red of the size of a needle-point. No large patches of ecchymosis or red blotches, so conspicuous in inflammation.

Intestines: mucous coat covered with similar small dots or points of red. Internal membrane of colon slightly tinged with red dots. Besides the hardened fæces in the commencement of this viscus, there were some small pieces of it along its course.

Œsophagus natural; internal coat, white pearl colour, and the venous ramuscules filled with blood, but the dots not conspicuous.

Throat: Along the upper margin of the glottis, as formed by the doubling of the membrane from the tip of the arytenoid to the side of the epiglottis, a tumor existed on each side, formed of serum and coagulable lymph, about the size of a small nutmeg, so loose as to hang over the glottis, and to be drawn over the rima glottidis in every act of inspiration.

To sum up what has been said, it appears then—

1st. That congestion is not an active condition of the part affected. When active, it constitutes inflammation.

2d. That congestion most frequently is the result of mechanical impediments to the venous circulation.

3d. That the other cases in which it occurs are where there is a want of reciprocal sympathy between the blood and the blood-vessels in the capillary system, in consequence of which the latter refuses passage to the red blood.

HOSPITAL REPORTS.

SUFFOCATION.

Cases of Suffocation from the Respiration of the Fumes arising from burning Coals. (GUY'S HOSPITAL.)

WILLIAM GARBETT, John Jackson, and John Harman, were brought into Guy's Hospital, at half-past nine on Saturday morning, Dec. 16th, in a state of insensibility. The circumstances which gave rise to the occurrence were as follow:—The above-mentioned men formed part of the crew of the Austria, of Whitby, and were in perfect health on Friday. At nine o'clock in the evening they retired, together with another of the crew, named Fairfoot, into the forecastle of the ship, for the purpose of going to rest. Before going to bed, the fire, which was contained in a grate placed in the centre of the room, was replenished with coals. At eight o'clock on the following morning, the usual signal was given by the mate for their appearance upon deck; but no answer being returned, he descended to learn the cause, and the following appearances presented themselves: Garbett and Fairfoot were lying on the floor, but Jackson and Harman remained in their beds; they were all in a state of stupor and insensibility, from which it was found impossible to rouse them, and they were brought up upon the deck, manifesting no other sign of life than a difficult and laborious breathing. The air of the forecastle was of a sulphurous and suffocating character, and, on investigation, it was found that the smoke and fumes arising from the combustion of the coals had been prevented from escaping by the removal of the upper division of the chimney, so that the orifice was several inches below the level of the deck, and consequently the smoke, instead of ascending, would be driven downwards by the wind. The hatchway, which was large enough to admit a full-sized man, had been inclosed throughout the night. The coals which had been used were from the Ouse, and seemed to be of a very inferior quality, containing rather a large proportion of sulphur.

From the foregoing account it would appear that the atmosphere of the forecastle must have undergone a gradual deterioration, by the admixture of sulphurous and carbonic acid gases, which were generated by the combustion of the coals. The effects which were produced upon the persons who respired this impure air, although uniform in some respects, yet differed very widely in severity. This variety, however, is not at all explicable from any difference in the concomitant circumstances; since, as the subjoined cases will show, the mildest and most severe cases took place under circumstances precisely similar.

CASE I.—— Fairfoot, a young man of healthy temperament, was found lying upon the floor, on his elbows and knees: when brought upon deck, he was breathing with difficulty, and was quite insensible; after having been exposed, however, about two hours to the open air, he began to exhibit signs of consciousness, and at eleven o'clock he was able to speak. Excepting the exhibition of a small quantity of brandy, no remedial measures were had recourse to. His resuscitation was preceded by vomiting.

At two o'clock, he was able to walk to the hospital, and seemed to suffer no material inconvenience. He could give no account of the occurrence, and was unconscious of having left his bed.

Case II.—Wm. Garbett, a robust and muscular man, aged thirty, was placed in circumstances very analogous to the former, and was found beside him in a similar position. When brought into the hospital, at half-past nine, he was completely insensible; his breathing obstructed and stertorous; his extremities cold; his pupils, though not dilated, perfectly insensible to light; and his pulse frequent and weak.

Friction with heated vinegar was immediately had recourse to, and some ammonia was administered. At eleven o'clock, he inhaled a bladder of oxygen gas: this produced a transient brightening of the countenance, the colour of the face becoming slightly redder. No permanent amendment, however, was effected: he remained much in the same state, brandy being at intervals administered, till one o'clock, when his breathing became gradually shorter, and at half-past one he expired. About two hours before death, the pulse was ninety, regular, and rather full.

Sectio cadaveris.—This took place about two hours and a half after death. The appearance of the face was like that of a man who had died from strangulation. On opening the head, very few morbid appearances presented themselves. The veins of the dura mater seemed a little engorged, but those of the pia mater were perfectly natural. There was rather a preternatural abundance of blood in the sinuses, and slight serous effusion between the tunica arachnoides and pia mater; the veins of the corpora striata were very turgid. In other respects, the brain was completely healthy.

Chest: The pleura and pericardium presented nothing remarkable. On opening the latter, the right side of the heart seemed much distended, and both the auricle and ventricle were found to contain a large quantity of fluid blood. The lungs had a dark appearance, and there was very considerable congestion in them. The trachea contained a small quantity of mucus, and its internal surface was tinged in many places by a black carbonaceous deposit.

The subjects of the two remaining cases were sleeping in the same bed, and placed under exactly similar circumstances.

Case III.—John Orman, a ruddy and healthy looking youth, apparently about eighteen. At the time of his admission, he was labouring under the following symptoms:—His respiration was rather difficult, pulse quick, and he was completely insensible.

Ammonia was administered, and heated vinegar rubbed over the body and extremities. In a short time the breathing became easier, and his nose became sensible to the impression of stimuli. In about four hours his face had assumed a natural appearance, and consciousness began slowly to manifest itself. He went on improving, and at two o'clock was able to answer questions correctly, and complained only of pain in the back.

About three o'clock he was bled, and recovered with no further inconvenience.

Case IV.—The subject of this case was a boy about fourteen. When brought into the hospital, his symptoms were very severe: the extremities were cold, the pulse very frequent and weak, the respiration difficult and laborious, the pupil of the left side was dilated, and but very slightly affected by the admission of light; that of the right side, however, was natural.

He was immediately rubbed with hot vinegar, and some ammonia and brandy were administered, by means of a tube introduced into the œsophagus. At eleven o'clock he inhaled a bladder of oxygen gas: this was followed for a short time by stronger and deeper respirations, and there was a transient amendment in the expression of the countenance, and slight, temporary redness in the face.

At twelve o'clock, the muscles of the left side were observed to be rigid, and often affected by spasmodic twitchings; the right arm was in almost continual motion, and the mouth was occasionally drawn to the left side. The temperature of the left side was perceptibly higher than that of the right. There was an almost incessant motion of the eyes produced by the alternate action of the abductor and adductor muscles. The pulse were ranging from 140 to 160 in the minute, were always small and weak, often fluttering and indistinct.

At one o'clock, a sinapism was applied to the chest.

About an hour from this time, he was seen by Mr. Morgan, (under whose care the cases were admitted,) when, no amendment having taken place, the jugular vein was opened. Very little blood, however, could be obtained, and it was therefore thought proper to open a vein in the arm: the blood taken from both amounted to six ounces. The effect of this was to produce for a few minutes an increase in the sensibility of the affected iris, and to render the pulse for a few minutes rather fuller.

In a short time after this, ten ounces of blood were drawn from the right temple by cupping. The pulse again rose for a few minutes, and the pupil remained afterwards more sensible to light.

No obvious permanent amendment was produced by these measures: his respiration continued to be difficult, and his pulse soon became again fluttering and indistinct, and, when perceptible enough to be counted, they were from 150 to 160 in the minute. Brandy and ammonia were administered at intervals, and oxygen was frequently inhaled. The latter never failed to produce a temporary excitement, during which the eyes were opened, and the respiratory muscles called into increased exertion.

He gradually became worse, his powers evidently decreasing. At seven in the evening, his breathing was short and quick, his pulse fluttering and not to be counted, and a cold perspiration bedewed the surface. A stimulating enema was administered, and oxygen again inhaled.

He rallied a little about ten o'clock, but soon sunk into his former state, and about four o'clock on the following morning he expired.

Sectio cadaveris.—Head: The dura and pia mater deviated scarcely at all from the healthy appearance; the veins of the corpora striata were turgid with blood, and coagula of blood were found in both the internal carotid arteries. There was slight effusion of serum at the base of the brain; and, when a section was made of the brain, the bloody points were found to be preternaturally numerous.

Chest: The pleura pulmonalis and costalis were united rather extensively by strong adhesions, apparently of long standing. A large quantity of partially coagulated blood was found in the right side of the heart and pulmonary arteries; and the vasa vasorum were unusually distinct at the origins of the aorta and pulmonary artery.

The lungs presented nothing worthy of notice.

STRANGULATED HERNIA.

We subjoin two cases of this kind, which bear upon an interesting and important practical question.

Case I.—William Fox, ætat. twenty-two, a hale young countryman, was brought to St. George's Hospital, at twelve m., December 5th, from Stanmore. He states that he has been subject to rupture from childhood, and that, till within the last twelve-months, he wore a truss, although there always remained some swelling at the part on which the instrument was applied. For the last year he has laid aside the truss altogether, and felt no inconvenience; nor did any additional protrusion occur until five o'clock last night, when, after wrestling, he found a swelling in the groin. He vomited soon afterwards. A surgeon who saw him bled him freely, and tried the taxis, which however failed. He passed a bad night, and the taxis was again ineffectually employed this morning.

On admission, there was seen a large scrotal hernia on the left side. The tumor was very tense, and tender upon pressure; the integument not discoloured, and the testicle could be felt below and rather behind the tumor, on which it was moveable: in this respect differing from congenital hernia. No pain on pressure of the abdomen; pulse ninety, not very hard; tongue white; no anxiety of countenance. The bowels had not been opened since the 3d, and he vomited the drink given him. He was placed in the warm bath for nearly an hour, and, on being removed to bed, was bled to syncope. The taxis was then employed, but without effect.

Five P.M.—Cold by means of the sulphuric æther, and bags of pounded ice, has been applied for the last two or three hours, with occasional attempts at reduction. These failing, he was again bled to syncope, and the taxis had recourse to; but no impression being made upon the tumor, Mr. Rose proceeded to the operation.

On cutting into the sac, much bloody serum escaped, and a layer of omentum was exposed, enveloping a large fold of small intestine. The omentum was comparatively but little altered; whilst the intestine, though still glossy and firm, was very dark and discoloured. The stricture, which was at the outer ring, and exceedingly tense, was divided, and the gut carefully returned, when it was discovered that a quantity of omentum still remained in the sac, to which it had contracted firm, and evidently old, adhesions. This it was not deemed prudent to return: it was accordingly disturbed as little as possible, and the integuments brought together by five or six sutures, with adhesive straps and compress.

Small doses of Sulphate of Magnesia, in peppermint water, every two hours.

He passed an excellent night, and had two or three stools; but, on the evening of the next day, he complained of a good deal of pain in the tumor, increased on pressure, and stretching from that up to the umbilicus. Pulse 100; skin hot and dry; great thirst.

V.S. ad ℥xx.—H. Sal. cum Mag. Sulph. sextis horis.

These means, with the application of twenty-five leeches, and fomentations to the abdomen, greatly relieved the pain there, but a good deal still remained in the tumor.

On the 8th, the pulse was 100, full and bounding; tongue brownish in the centre; nausea; occasional chilliness. The straps were removed, and the wound found to have in great measure united, but a degree of fulness was observed at its upper part.

V.S. ad ℥xij.

9th.—He fell into a perspiration after the bleeding, and passed a good night. Still looks anxious; pulse has more jerk; nausea; headache; thirst. There is a distinct blush with a little œdema about the wound, and at the outer and upper part of the tumor there is evident fluctuation. At this part a puncture was made, giving vent to an ounce or more of darkish pus, mixed with bubbles of air; not, however, having the odour of sulphuretted hydrogen.

H. Sal. Effervesc. cum Succ. Limon. recent p. r. n.—Cat. Lini.

In the evening, a small artery, which had been divided by the lancet, threw out nearly a pint of blood into the poultice. The bleeding was stopped after some trouble, by compresses of lint and rags dipped in cold water. From this period all the bad symptoms disappeared.

Case II.—Joseph Haplin, æt. forty-two, admitted twelve P.M. December 15th, under the care of Mr. Brodie, with inguinal hernia in the left side. The tumor was tense, oval, about the diameter of an orange, and there was little pain in it on pressure. There was great tenderness, however, of the abdomen; constant vomiting; hiccough; anxious countenance; skin pale and cold; pulse small and weak.

At five A.M. of the day of his admission, whilst going his rounds as a watchman, he was attacked with griping of the bowels, to which he was subject. He returned home and went to bed, but the pains increased, and at ten A.M. he began to vomit. The tumor was at this time rather larger than usual, and as the day advanced it became painful, and perceptibly increased in size.

The warm bath, taxis, &c. were employed by the house surgeon, but to no effect. At three A.M. Mr. Brodie arrived, and determined on an immediate operation. A knuckle of intestine, much redder than natural, was found at the upper part of the sac, and a portion of omentum, not thickened or otherwise diseased, extensively adherent to it below the stricture. The stricture, which was at the neck of the sac, was divided, and the gut returned; but the adherent omentum was left. The patient did well.

Observations.—It will be observed that in these cases the omentum was left unreduced. In both it was extensively adherent, and in neither was it disorganized. We fear that we should far exceed the space allotted us, were we to enter at all into what authors have advanced upon the treatment of strangulated omentum. Sir A. Cooper, in his very excellent observations upon Hernia, published in the third volume of his "Lectures," remarks that, if the omentum be very large, if it be in a state of mortification, or if it be "hardened, and have a scirrhous feel," it should be removed wholly or in part; the divided vessels secured by fine ligatures, and these, one end being cut off, should be left hanging from the wound. If, however, says Sir Astley, omentum alone adheres to the sac, it may be freely separated and returned. Mr. Brodie, whose experience cannot have been inconsiderable, comes to a different conclusion. In his clinical lecture upon Joseph Haplin's case, he observed, that whatever difficulty obtained in reducing the omentum, either from its being adherent, mortification, or from its being converted into a large fatty mass, the old practice used to be to cut it off, or apply a ligature upon it. With regard to the ligature, authors are almost unanimous in disapproving of it: in fact, as Sir A.

Cooper shrewdly remarks, it is renewing with increased severity what the operation was intended to relieve—the stricture on the part.

Mr. Brodie is inclined to think that the excision of the omentum is not so devoid of difficulty and danger as some would seem to infer. If no vessels are tied, the hemorrhage may be very considerable: indeed, Mr. HEY has published two cases in which the patients nearly died of it. If, again, the arteries are tied, the ligatures cut off close, and the omentum returned, we are not sure that bleeding may not take place within the abdomen, from vessels which did not bleed while the omentum lay exposed in the sac, and which therefore were not secured: and, besides, what is to become of the ligatures? Mr. EARLE related to Mr. Brodie a case of this kind, in which they were discharged through an abscess which presented itself at or near the umbilicus. The patient recovered; but, nevertheless, an abscess of the belly, which bursts at the umbilicus, cannot be supposed to be always free from danger. If, instead of the ligatures being cut close, one end of each of them be left hanging out at the neck of the hernial sac, the omentum must, of course, remain drawn down to the abdominal ring; and in what respect is the patient better off than if a portion of it had been left in the sac itself? There is also some danger in this case of inflammation of the cut end of the omentum; and Mr. Brodie mentioned one case in which an abscess formed in the omentum, at this part, immediately within the internal abdominal ring, and the patient died in consequence.

He, however, stated, that he did not mean to condemn the excision of the omentum in all cases, but merely to express that it ought not to be done without a very sufficient reason; and that in cases where there is not a very large quantity of omentum in the hernia, but where it is externally adherent to the surface of the sac, it is safer to leave it where it is found, than to cut off a portion of it, or to dissect through the adhesions. The success of this practice in the two preceding cases, is certainly in its favor. The patients are left as well off as they were before the strangulation took place; and probably better, inasmuch as it is most likely that the omentum, after the operation, must have contracted adhesions to the neck of the hernial sac, making them less liable to a descent of the intestine. (*Condensed from the Medical Gazette.*)

FRACTURE OF THE SKULL.

Cases of Compound Fracture of the Skull, with Depression. With Observations by B. TRAVERS, F.R.S.

CASE I.—October 20th, 1827, William Clark, æt. thirteen, was brought into ST. BARTHOLOMEW'S HOSPITAL, at eight P.M. in a state of stupor from a severe blow with a staff flung from a height, which had produced a radiated fracture of the left parietal bone, with depression. His pulse was small and irregular; skin cold; breathing hurried; frequent contractions of the muscles of the face and right arm; pupils moderately dilated, contracting feebly to the light; and much writhing of the body while the head was examined. The scalp wounds were dilated and joined, and four portions of depressed bone removed. Another large portion not detached was raised to the surrounding level, and a space equal to about two inches of the dura mater lay exposed.

He lost a few ounces of blood from the arm on the same night and succeeding day, and his bowels were kept gently open by castor-oil. On the 22d, (third day,) his pulse was 140, and he was disposed to coma, with oppression of the chest, and complained of pain in the head. These symptoms yielded to a dozen leeches applied to his temples, and motions obtained by castor-oil and a clyster. On the 25th, (sixth day,) he was convalescent.

After some days he had a smart attack of diffused inflammation of the connecting cellular tissue of the scalp and occipito-frontalis muscle, with much soreness and tumefaction on the opposite side of the head, and accompanied with fever. Twenty leeches were applied, and afterwards a cold lotion. He took a solution of salts with Liq. Antimon. Tartar., and the part recovered without suppuration; since which his progress to health has been uninterrupted.

CASE II.—November 10th, 1827, John Williams, aged thirteen, was admitted into St. Bartholomew's Hospital, about noon, with a severe injury of the head from the falling of a wall after a fire. He was perfectly rational, and had no symptom of mischief to the brain, but a feeble pulse of sixty, and a cold surface.

A lacerated wound of the scalp near the posterior extremity of the sagittal suture on the right side of the cranium was dilated, and discovered a fracture extending from the suture, near its junction with the lambdoidal, across the parietal bone. The sagittal suture was loosened, and, at some distance from the former transverse section, another, commencing at the suture, took a diagonal direction. The triangular portion of bone included was driven in, and so wedged as to require the removal of a small portion of contiguous bone for the application of the elevator. A free venous hemorrhage occurred, which was checked by applying a dossil of lint. He lost rapidly near a pint of blood, and it was apprehended that the sinus was wounded. In the evening he was found quiet. His pulse had risen, he was sensible, and not complaining of pain, but disposed to sleep. In the morning he was heavy to sleep, having passed the night in that state without restlessness. He was perfectly sensible when spoken to, but unwilling to be roused; his pulse feeble, and intermitting occasionally. He had passed urine, and rejected a dose of castor-oil.

At two o'clock, the same state, drowsy, but rational; some blood had issued from the wound. The bowels had not acted, and four grains of Calomel and a common clyster were directed. These procured copious relief from the bowels.

Between five and six he expired, with little, if any, change of symptoms.

On examination, the exposed dura mater was found discoloured, and also a small wound in that membrane connected with a vein of the pia mater near its entrance into the longitudinal sinus, from which the hemorrhage had proceeded. The veins of the corresponding space of the pia mater were loaded, so as to give it a thickened appearance. The cortical substance was marked with specks of extravasation opposite the injury. Otherwise the brain was natural, firm, and healthy.

Case III.—Novomber 10th, 1827, Stephen Briffet, æt. twelve, was brought in along with the former, having received a similar injury at the same time and place. He had been stunned, but was now recovered. The skin, however, was chilled, pulse small, and breathing slow. A flap wound of the scalp over the left parietal bone, near its upper and posterior angle, exposed a fracture; and, after a farther dilatation of the exposed integument, a central portion of the bone, of the diameter of an inch, was observed to be insulated, and driven down upon the brain. From this a fissure extended towards the sagittal suture. The depressed piece was raised by forceps, without the aid of the trephine or saw. In addition to bruises, there was also a lacerated wound of the eyelids of the left eye at the external angle of the orbit, which had detached them and penetrated the conjunctiva, so as to lay open the orbit on this side to the bottom. In the evening, the boy was as well as could be desired, faculties perfect, and skin warm, with a moderate and soft pulse.

On the third day, having passed a restless night, his appearance and manner became altered. He was very restless, tossing about constantly, and complained of a pain in his head. The pupils of the eyes were dilated. The bowels having been opened, and the stomach rejecting medicine, forty drops of laudanum were injected in a clyster, and retained. This procured him five hours of sound sleep; but he continued to get worse, and died on the night of the 16th.

Examination.—A boundary of adhesive matter, corresponding to the fractured and denuded bone, was seen upon the dura mater, after raising the vault of the cranium. This membrane was sound. On raising it, the general appearance of this hemisphere was paler than that of the opposite side; the vessels of the pia mater being in a state of emptiness. The cerebral substance, on the contrary, exhibited very numerous red specks on section, and the cineritious substance opposite the injury was preternaturally loaded with blood. The chambers and basis of the brain were natural, but its substance soft.

Observations.—In all these cases the symptoms were thos of commotion. In the first case there was evidence of pressure also, and of its relief by the operation, in the state of the senses, the breathing, the pulse, the pupils, &c. as compared before and after the operation. But the recurrence of similar symptoms on the third day, as well as the character of those first displayed, does not admit of this being entirely referred to the displacement and pressure of the fractured bone: it was like the greater number of these accidents, a mixed case.

Whilst Mr. Travers was hesitating to operate upon Williams, the second case, it was observed that a circular piece of bone was apparently missing; but, upon gently dropping the probe through the aperture, it struck upon the surface of the displaced bone, and the apprehension of consequences from its complete impaction beneath the cranium determined him to proceed. It was by this piece that the dura mater had been torn, and, as the event proved, there would have been less risk in allowing it to remain; for it is probable that the boy's death was accelerated, under the existing circumstances, by the free hemorrhage from the pia matral vein.

Both these lads, Williams and Briffet, had been stunned, and laboured under the effects of severe physical shock or concussion. They were passively intelligent, pale, cold, with a small and feeble circulation. There was nothing in the symptoms that pointed to the head as the seat of injury. Their state was undistinguishable from that which we see every day produced by injuries of parts remote from the brain. Nevertheless they were in process of gradual recovery from the effects of a direct concussion of the brain, which an hour before had deprived them of sense and motion. The boy Clark (No. 1,) had been stunned to insensibility, and remained stupid, tossing his arms about, and moaning when disturbed for examination. He also was pale and cold; his pulse feeble and intermittent; he had rejected the contents of his stomach; his breathing was oppressed, not stertorous; pupils dilated, but not motionless. The relief following the operation in his case was marked and immediate.

The mode of injury by which a concussion is inflicted must influence not only the degree, but the character of the mischief. The singleness and purity of the concussion, or its combination with compression, creates a marked distinction.

The nature of a concussion, as of a fracture, is probably determined by the more diffused or circumscribed operation of the force by which it has been inflicted. Clark (No. 1,) was struck with a rail, or piece of wood, flung from a loft. Williams and Briffet were buried under the ruins of a falling wall.

Modern experiments have shown the difference in the effects (upon the organs which maintain life) of an injury which wounds or divides, and one which crushes or breaks down the structure of the brain or spinal marrow; between the wound or removal of a part, and the disorganization of the mass. It would appear that the effects of a severe concussion are entailed upon the injury from the moment of its infliction, although the immediate symptoms of disturbance sometimes recede, and an interval of comparative tranquillity succeeds to it. For where no lesion of the brain or its membranes, nor any inflammatory action, has existed, how otherwise can we explain the recurrence of symptoms similar in character to those which mark the first stage,—that is, of purely nervous symptoms, after a period of three or more days, and their speedily fatal termination,—but by supposing a deeper and more universal injury to the nervous mass than was at first apprehended. The extraordinary frequency and conspicuousness of the red points, upon section of the medullary substance of the brain, Mr. Travers noticed repeatedly, contrasted with the empty state of the vessels upon the membranes, in cases in which the symptoms of shock had prevailed, both consequent upon and unconnected with injury of the head. A congested state of the capillary atteries to so considerable a degree as to render many conspicuous, which in a healthy brain are invisible, is a phenomenon opposed to that actually presented in fatal determinations to the head, in which the veins of the membrane are loaded, that in this are pale and collapsed. This congestion of the cerebral circulation in the arterial capillaries, or at least colourless vessels, must be gradual, and unlike that which happens in the general circulation at the moment of death. It is probably an effect of the impaired tone of the nervous structure, but it must exercise in turn a most extended influence on the actions of that system, and the functions of life. This, and the tendency to serous effusion, commonly regarded as the signs of inflammation, are the most notable appearances met with after death from concussion. Dr. WILSON PHILIP, in his chapter on Serous Apoplexy, (Enquiry into the Laws of the Vital Functions, p. 311,) has some interesting observations tending to show the analogy in the symptoms of concussion and of serous apoplexy, as contradistinguished to those, likewise analogous, of sanguineous apoplexy and compression. The depleting treatment cannot be borne in the former, which the latter calls for. Inflammation is equally remote from both.

Mr. Travers makes this observation as a caution to his juniors in the profession, against the premature employment of the lancet in concussion,—that is, before the circulation has completely recovered itself, or rather before the commencement of an action decidedly inflammatory. It is curious to observe how blindly the notion has been acted upon, which has been so generally and energetically impressed. The quantity of blood which a man can afford to part with in a given number of hours, is commonly exemplified by reference to cases of inflammation of the brain. Now, concussion and inflammation have unfortunately been identified, and lives have as undoubtedly been lost in the former, as saved in the latter, by the lancet. The reporters of the cases speak of a cold and pallid surface, and a sunken pulse, and its further sinking under the lancet, and their fear to proceed, in the same paragraph. Day after day, however, it has been resumed, as if in obedience to an abstract principle, and it is stated as matter of regret that only four or six ounces, instead of eight or twelve, as ordered, could be obtained at the last bleeding.

In most cases of concussion, the following treatment will, Mr. Travers thinks, be found most suitable. To relieve congestion, and no more, leech bleedings, and lax, not fretted, bowels: he prefers calomel or castor-oil, as the case requires, and the domestic clyster;—cold lotion to the shaved scalp, blisters to the occiput or nape of the neck; stimulant enemata, as of turpentine and assafœtida, if there be stupor and drowsiness; and if vigilance, tremors, and delirium, with a stomach too irritable to retain medicine, opiate clysters. The effect of both these remedies is excellent in the states described.

Cases of mixed symptoms are more frequent than such as admit of no mistake. In their descriptions, authors have displayed a regard for more exact and positive distinctions than nature commonly exemplifies. To give a system-like simplicity and an oracular tone to their directions, they have introduced diagnostics which are seldom seen, and still seldomer to be relied on. Take concussion and compression for example. The most frequent case is that in which the symptoms of commotion and pressure are so far blended as to make it doubtful whether, if not depending upon, they are not at least maintained by the displaced portion of bone. In a consultation, one party decides that it would be most prudent to elevate the depressed piece immediately, because, when inflammation is set up, and the symptoms become urgent, he considers that the operation aggravates the injury, and quickens the fatal event. The other questions this fact, and prefers to take the chance of the symptoms subsiding by abstinence, depletion, &c. Now, which of these parties is right? Thus far the question was tried under the observation of Mr. Travers, many years ago, at Guy's Hospital. Two boys were admitted, patients of the same surgeon, with compound fracture of the skull and depression. Neither had any symptoms of compressed brain, and consequently no operation was practised. After some days one of them was attacked with symptoms of inflammation, and the depressed bone was elevated. The symptoms were not in any degree mitigated, and the boy died. In the other the operation, which had been hitherto postponed, was now performed, and he did well. He might, however, have done as well had he been let alone, no symptoms having occurred; and the narrative therefore only shows, what we were predisposed to believe, that, where inflammation of the membrane follows upon depression, the operation is of no avail. Inflammation of the dura mater is a consequence of depression, but, if the parts be undisturbed, it may be limited to the spot, and the membrane be preserved from suppurating and spoiling. Mr. Travers would consider the advantage of being beforehand with the inflammation,—the many facts to prove that depression is by no means an irrecoverable condition,—the probability that if it be so inconsiderable as not to produce symptoms in the commencement, it may be prevented from afterwards doing so,—as full and sufficient grounds for declining the operation in all cases in which no real symptoms of compression presented themselves. On the other hand, the symptoms of compression being present, the operation, in his judgment, should be resorted to, whether the scalp were wounded or not. Thus Mr. Travers would make the presence of symptoms of compression, *cœteris paribus*, the criterion by which to determine the fitness of the operation; and the more marked the symptoms, the more indispensable the operation. And when, as in the case supposed, the symptoms are of a mixed nature, (and they are never absolutely separable,) we must be guided according to the predominance of either, being in mind that, in proportion as pure concussion prevails, any operation is objectionable. (*Medical Gazette.*)

ANEURISM.

Axillary Aneurism of the Right Side. Operation of Tying the Subclavian Artery.

The following appears to be one of the most dexterously performed and successful operations of the kind on record.

William Weston, æt. thirty-eight, a stout and very muscular man, was admitted November 28, at GUY'S HOSPITAL, under the care of Mr. BRANSBY COOPER. About three months ago, he felt a slight pain and numbness just below the middle of the right clavicle, which extended down the arm to the fingers: this occurred once or twice a week, increasing in severity each time. At the end of a month, the paroxysms had become so violent that, during their continuance, he was obliged to desist from his ordinary occupation—that of a wood hawker. In nine weeks from the first attack, his attention was directed to a slight fulness upon the upper and fore part of the chest. Sixteen years ago he worked very hard, excavating a dock; he drank freely at that time, but has lived very temperately for the last few years.

Upon examination, a large pulsating tumor was perceived in the axilla of the right side, extending to the fore part of the chest, and producing a fulness, about the size of an egg, between the subclavius muscle and clavicular portion of the pectoralis major: the tumor could be traced so far back as the edge of the latissimus dorsi; the base could not be distinctly felt; handling the swelling increased the pain; a very slight pressure on the subclavian artery completely stopped the pulsation in the tumor. The arteries of the arm were uninfluenced by the aneurism, the pulsations at both wrists corresponding, which, however, were unusually feeble. The numbness and pain had become so great as entirely to deprive him of rest. He was ordered a little aperient medicine a day or two prior to the performance of the operation, which took place on Tuesday, December 4th.

The patient was placed upon a long table, in the horizontal posture,* with the shoulders slightly elevated, the head directed to the left side, the right arm forcibly drawn down, and the shoulder depressed. The integuments covering the clavicle were stretched upon the chest, and the operation commenced by making an incision about three inches long, which laid bare the edges of the sterno-cleido-mastoideus and trapezius muscles; when the skin, from its natural elasticity, retracted, so as to leave a free opening above the clavicle, exposing the superficial cervical fascia, the platysma myoides being perfectly divided. The centre of this incision was met by a vertical cut, in the direction of the posterior edge of the sterno-cleido-mastoideus. The external jugular vein was dis-

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* Mr. Cooper here remarked upon the necessity of the horizontal posture, for the entire deprivation of all muscular action, every fixed point being thus taken away.

tinctly seen on the inner side. The anterior edge of the scalenus anticus muscle was next laid bare by clearing away (with the sharpened handle of the knife) the condensed cellular texture, during which process the omo-hyoideus was exposed, and the artery seen immediately emerging from between the scaleni: it was easily cleared from the surrounding parts, so as to admit of the passage of the aneurismal needle. This instrument deviated from the one generally used, by forming a larger portion of the segment of a smaller circle, so as to occupy much less room. A single silk ligature was passed under the artery, and tied in the ordinary way: the vessel could then be seen pulsating between the heart and the ligature, although previously the pulsations could scarcely either be seen or felt. One end of the ligature being cut off close to the artery, the other was left at the external wound. The integuments were brought together by a single suture and adhesive plaster, and the right arm and hand were enveloped in flannel. The patient was then replaced in bed, having scarcely lost an ounce of blood: indeed, only one small artery was divided, and which ceased bleeding without being tied. The pulsation in the tumor entirely ceased upon the application of the ligature, and the sac soon became completely empty. The patient expressed great relief, and did well.

CRITICAL ANALYSES.

> Quæ laudanda forent, et quæ culpanda, vicissim
> Illa, prius, cretâ; mox hæc, carbone, *notamus*.—PERSIUS.

A Practical Essay on Stricture of the Rectum; illustrated by Cases, showing the Connexion of that Disease with Affections of the Urinary Organs and the Uterus, with Piles, and various Constitutional Complaints. By FREDERICK SALMON, Surgeon to the General Dispensary, Aldersgate-street, and formerly House-Surgeon to St. Bartholomew's Hospital.—8vo. pp. 188. G. B. Whittaker, London, 1828.

THE object of this work is "to prove that stricture of the rectum is a very common disease, inducing other important affections, and that surgery furnishes us with means adequate to its removal, or alleviation, provided such means are exercised with judgment and science." (*Preface.*) Our surgical readers are no doubt well aware that it is only of late years that common stricture of the rectum has attracted much attention in this country, and that to Mr. COPELAND and Mr. WHITE, of Bath, the profession are mainly indebted for what they know upon the subject. Mr. CALVERT, indeed, latterly published his Prize Essay, which contained many valuable facts and observations; but still the profession do not appear to have hitherto attached so much importance to these diseases as they deserve,—perhaps from the repulsive nature of the means of cure, and perhaps also from a little scepticism, and something like an apprehension that the mode of cure usually recommended has been carried in some quarters to a very pernicious excess. We confess that this is the impression upon our minds; but we shall not detain our readers with our own speculations: we shall proceed at once to analyse Mr. SALMON's volume, and leave others to judge of the soundness of his views and the value of his labours. Fortunately his work is of a very manageable size, and will enable us, therefore, to comprise our remarks in a short article.

Our author, after an anatomical description of the parts involved in the disease, proceeds, in Chapter the 2d, to enumerate the Causes of Stricture of the Rectum, which may be thus enumerated:—a constitutional predisposition, arising from the narrowness of the gut at the sigmoid flexure, (which induces him to believe that it is very often a congenital disease;) any thing tending to produce local irritation in the rectum; the administration of frequent drastic purgatives; mechanical impediment from indurated fæces, and a peculiar construction of the orifice of the anus. In females there is an additional source of the disease, arising from an enlarged and tender condition of the uterus; and, finally, piles, excrescences, enlargements of the prostate gland, and fistula in ano, may all lead to this affection. Carcinoma must not be omitted among the causes. In the first instance, Mr. Salmon believes the greater portion of strictures to be merely spasmodic; but it will be easily conceived that, in process of time, depositions will form between the coats of the bowels, that it becomes thickened, wrinkled, inflamed, and ulcerated. In long protracted cases, adhesions will be formed between the rectum, uterus, and vagina; and fistulous communications will occasionally exist between them. Sometimes bands of a firm consistence are formed across the bowel.

Regarding the *situation* of stricture of the rectum, our author thinks that it takes place higher up in the gut than is usually supposed. In the greater number of cases which have fallen under his care, from five to six inches was the common situation; next in frequency, the disease occurs at the junction of the sigmoid flexure with the rectum; the very reverse of which, he thinks, is the case in carcinoma of the rectum.

We make no extracts from the third Chapter, on the Symptoms of Stricture, the detail of which differs in no way from the account usually given by other writers, but proceed to Chapter the fourth, on the Treatment of Stricture: this our author divides into constitutional and surgical. Among the first of these, indeed, we find many topical applications, together with cupping to the perineum, leeching, &c., which we should scarcely have enumerated under the head of constitutional means. Much stress is laid upon a proper management of the stomach and bowels. The local means, we are told, can never establish a recovery without a due attention to the daily regularity of the bowels. We must, in fact, take care not to overload the stomach with food, nor act upon the bowels with violent cathartics: therefore he prefers castor oil, or the senna confection, with precipitated sulphur, or injections of thin gruel with a dessert-spoonful of castor oil. Mr. Salmon employs several pages in dietetic rules and regulations: we may be excused from reciting them, not because they are prolix, but because their necessity is now very generally felt and admitted by all.

Chapter the fifth, on the Introduction of the Bougie, may be said to contain the very essence of the work; for it is by the careful and scientific use of the bougie alone that we may expect the curative measure to be accomplished, and we therefore give the following extract in the author's own words:

"One or two hours previous to the examination of the rectum, an injection is to be administered of tepid poppy water, containing forty or fifty drops of laudanum, which will tranquillise the bowel, and remove any lodgment of fæces. The patient should also be requested to make water immediately previous to the introduction of the instrument. The rectum is first to be examined with the finger, to ascertain that there is no kind of obstruction near the orifice.

"The patient, if a male, leaning over the back of the chair, or the side of a bed,* should draw aside the nates fairly to expose the orifice of the bowel. A full-sized bougie, not less than eleven inches in length, thoroughly softened and well oiled, adapted to the shape of the passage through which it is to be passed, is to be introduced with the convexity of the first curve towards the sacrum, in which way it is to be passed upwards and backwards about two inches,† through the third portion of the bowel, provided it gives no pain, for the introduction will

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* "In females the examination, being made beneath the bed-clothes, is conducted without the slightest exposure.

† "The last curve of the rectum is so trifling, that it matters not whether we introduce the convex or concave part of the instrument towards the sacrum; but, by passing it with the convexity backwards, we avoid the necessity of altering the position of the bougie in passing it through the second curve of the bowel.

commonly produce an uneasy sensation; we continue to propel the bougie in the same direction, about three or three and a half inches higher, or through the second portion of the rectum; the point of the instrument will now bear directly upon the hollow of the sacrum, and the but-end towards the left side of the body. With a view, therefore, of avoiding the sacrum, and of accommodating the instrument to the great curve of the rectum, we change its position, by describing the segment of a circle from left to right, with the but-end, turning it upwards, at the same time continuing to propel the instrument. Having described this segment, we shall have carried the bougie full four inches farther, or to what may be considered the extent of the rectum. But it is yet to be introduced into the sigmoid flexure: we therefore triflingly depress the but of the instrument, at the same time propelling it upwards, till the whole is fairly within the sphincter: this accomplished, we may be satisfied.

"Having passed the instrument between five and six inches, the patient generally complains of pain not only in the rectum, but over the surface of the abdomen, particularly in the umbilical region.

"Upon encountering obstruction, trifling pressure is to be maintained for a minute or two, and if under this careful pressure the pain increase, and the instrument remain stationary, it is to be withdrawn, the next size introduced, and so on from above downwards, till we ascertain the size which passes with trifling pain or difficulty into the sigmoid flexure. Should we doubt whether the bougie has entered this part, the doubt will be removed by relinquishing the pressure from the end of the instrument, when, if the bougie has not entered the sigmoid flexure, it will slowly recoil; we are occasionally apprised of its having entered this part by the passage of air from the bowel.

"The bougie is to remain in the bowel ten or fifteen minutes, provided it produces no considerable irritation, care being taken to affix a tape through the loop to prevent the instrument being drawn up into the rectum; at the expiration of that time it is to be removed, and allowed to harden in the shape to which the intestine has moulded it: this will be of considerable service in the subsequent treatment of the case, acting as a guide by which we adapt the several instruments throughout the curative process. In withdrawing the bougie, we should bear in mind the anatomy of the rectum, being cautious not to strike the point of the instrument against the angles of the intestine.

"Very commonly the two or three first introductions of the instrument cause a distressing desire to relieve the bowels: this desire will, however, gradually subside.

"At intervals of from three to five days, the operation is to be repeated, increasing the size of the bougie, and the period it is suffered to remain in the intestine, according as the circumstances of the case permit. We shall commonly be enabled to use a larger instrument on the second, third, and fourth introductions, when that we commenced with does not exceed No. 4; but, when the size originally passed reaches No. 7, we shall seldom be enabled to increase it more frequently than at every other introduction. As the instruments become of larger size, we shall be necessitated to pass the same two, three, and frequently even four times; but no established rule can be laid down upon this point, which must depend upon the extent and nature of the contraction, equally with the constitutional irritability of the patient. (P. 40.)

The mode in which the bougie acts is twofold, by dilatation and absorption.

With regard to the quality of the bougie, our author observes that the composition recommended by Mr. WHITE has not sufficient density, and is only adapted for cases where the bowel is very irritable. The instrument used by Mr. Salmon is composed of fine linen cloth, very heavily coated with wax, and a certain proportion of diachylon plaster, mixed with a small quantity of lampblack: it is to be immersed in very hot water some minutes previously to being used, which renders it pliant without depriving it of one regular smooth surface. The largest sized bougie is three and a half inches in circumference; the smallest, one inch; the medium between the two is divided into ten sizes. The length of the bougie is about eleven inches. Our author condemns metallic rectum bougies, and disapproves of the gum-elastic one. When the stricture is accompanied with great local irritation, the bougie may be smeared over with an ointment, composed of an ounce of elder ointment, with a scruple of very finely powdered opium.

We are next instructed, in Chapter 6th, in the mode of discontinuing the use of the bougie, as well as the inconveniencies sometimes attending its employment. The latter may be thus enumerated: numbness in the thighs and legs, shiverings, pains over the whole abdomen, powerful action of the sphincter muscle, and a great liability to taking cold, or mucous irritation during the process. When the disease is situated high up, a considerable length of time is necessary for the cure. Sometimes a few introductions of the bougie will be sufficient: they should be persisted in until No. 8 can be readily passed into the sigmoid flexure; and they are to be discontinued gradually, until it is employed merely as a preventive once in six weeks or two months.

Chapter the 7th, on Dividing the Stricture, we pass by. The plan is not recommended by our author, and the mode of performing the operation is not novel. The following, Chapter the 8th, is very short: it describes the morbid anatomy, symptoms, &c. of Carcinoma of the Rectum, but contains nothing that need detain us a moment, and certainly adds nothing to what was previously known of this fatal affection.

We have now gone through the general remarks contained in Mr. Salmon's work. The remaining chapters, by far the largest portion of the volume, are occupied in describing the effects of stricture of the rectum upon contiguous or other organs; and, as they are chiefly illustrated by cases, it is obviously impossible to abridge these with any advantage to our readers, and we must therefore content ourselves with giving the heads of the chapters, or very little more.

The 9th Chapter contains remarks upon Affections of the Urinary Organs, or Kidneys, as connected with stricture of the rectum, and which may be readily comprehended from the relative situation of the parts.

The 10th Chapter on Affections of the Uterus and Vagina, contains some remarks which we must notice.

> "We shall commonly find the uterus sympathise with the rectum, and indistinct appearances arise, leading us to suspect incipient disease in the former organ, which disease will totally disappear upon the removal of stricture in the rectum. I have known discharges from the vagina to subside upon the relief of stricture, and I am of opinion that many cases of miscarriage have their origin in that complaint. This appears probable, when we reflect upon the contiguity of the parts. From any accumulation in the rectum, pressure is made upon the uterus, which pressure is increased at each attempt to relieve the bowels: this naturally irritates the uterus, disturbing its functions, and giving rise, during the period of gestation more especially, to those irregular contractions which may ultimately cause it to reject its contents. (P. 102.)

These points are illustrated by the relation of several cases.

The 11th Chapter is devoted to the consideration of Distention and permanent Enlargement of the Colon, chiefly introductory to two cases of this affection, which are detailed at great length.

We must here conclude our extracts. There are yet two chapters in the book: one on Piles, the other on Determination of Blood to the Head, as a consequence of stricture; they are each followed by the relation of numerous cases.

It may be expected that we should conclude this article with something like an opinion as to the merit of our author's production. We think, then, that Mr. Salmon has compressed into a narrow compass all that can be said upon his subject. There is, perhaps, very little novelty in his doctrines; and there is some doubt in our minds with regard to the very common occurrence of the disease as insisted upon by our author; and, moreover, we are not without our fears that it may induce practitioners to look too much to this source of disease, to the exclusion of other more general and constitutional causes of the various symptoms which are here said to exist so often in connexion with stricture of the rectum.

Observations on the Mortality and Physical Management of Children. By JOHN ROBERTON, Member of the Royal College of Surgeons, Edinburgh; of the Literary and Philosophical Society of Manchester; and one of the Surgeons to the Manchester Lying-in Hospital.—12mo. pp. 311. Longman and Co. London, 1827.

THIS Treatise is divided into two parts. Part the first is designed to show the amount as well as the causes of infantile mortality in this country. In the second part, that department only of the physical management of children is attempted, which comprehends the maintenance and improvement of the health: that which relates to the cultivation of the individual faculties has been omitted, as foreign to the design of the work. Several tables are given, showing the rate of infantile mortality in different places. Such documents would doubtless be interesting in many points of view, if their correctness could possibly be relied on. But the carelessness with which such registers are usually kept in this country, particularly as far as regards the causes of death amongst children, is too notorious to warrant us in drawing any useful conclusions from the aggregate numbers thus recorded. The proportional mortality under ten years of age, in foreign countries, nearly approaches that in our own. According to SUSMILCH's German Tables, it is 43 per cent. for the country, 47.7 for small towns, and 50.2 for large cities. In France, according to DUVILLARD, it is 44.89 on the average of the kingdom. In different places, a variety of local circumstances produces a corresponding difference in the ratio of mortality amongst children of an early age.

"When we consider the peculiar circumstances of the labouring poor in manufacturing districts, their frequent privations, their improvidence, ignorance, and vicious habits,—and the low, badly ventilated abodes of the majority of such of them as live in large towns,—we cease to wonder that so few of their children comparatively should be reared.

"In Manchester and Glasgow, many of the poorest class are Irish. It is difficult to estimate their number, but it cannot be less than twenty-five or thirty thousand in each place. Their habits are well known. In confined filthy yards, noisome cellars, old ruined buildings, we are sure to find this singular people the principal tenants, huddled together in their peculiar way, and, in spite of every privation, marvellously content. So perfectly do most of them continue to maintain their native habits in this country, that no conveniences and comforts which they see others of their own condition enjoy, and which they might as easily attain, do in the least degree stimulate them; a proof how slow and difficult is the progress from barbarism to civilised life." (P. 32.)

The following sketch of the apathy of the lower classes of the Irish will afford sufficient proof of the probable degree of mortality amongst their children. It is taken from a work on the Population of Dublin, by the Rev. J. WHITLAW. In one house this gentleman frequently found thirty or forty individuals, and, some years before the period of his survey, No. 6, Braithwaite-street, contained 108 human beings.

"This crowded population, where it obtains, is almost universally accompanied by a very serious evil: a degree of filth and stench inconceivable except by such as have visited these scenes of wretchedness. Into the back yard of each house, frequently not ten feet deep, is flung, from the windows of each apartment, the ordure and other filth of its numerous inhabitants, from whence it is so seldom removed that I have seen it nearly on a level with the windows of the first floor; and the moisture that, after heavy rains, oozes from this heap, having frequently no sewer to carry it off, runs into the street by an entry leading to the staircase. One instance out of a thousand that might be given, will be sufficient. When I attempted, in the summer of 1798, to take the population of a ruinous house in Joseph's-lane, near Castle Market, I was interrupted in my progress by an inundation of putrid flood, alive with maggots, which had, from an adjacent slaughter-yard, burst the back door, and filled the hall to the depth of several inches. By the help of a plank and some stepping stones, which I procured for that purpose, (for the inhabitants, without any concern, waded through it,) I reached the staircase. It had rained violently, and, from the shattered state of the roof, a torrent of water made its way through every floor, from the garret to the ground. The sallow looks and filth of the wretches who crowded round me indicated their situation, though they seemed insensible to the stench which I could scarce sustain for a few minutes. I counted in this sty thirty-seven persons; and computed that its humane proprietor received out of an absolute ruin, which should be taken down by the magistrates as a public nuisance, a profit rent of above £30. per annum, which he exacted every Saturday night with unfeeling severity. I will not disgust the reader with any further detail, and only observe, that I generally found room-keepers of this description, notwithstanding so many causes of wretchedness, apparently at ease, and perfectly assimilated to their habitations. Filth and stench seemed congenial to their nature; they never made the smallest effort to remove them; and, if they could answer the calls of hunger, they felt, or seemed to feel, nothing else as an inconvenience." (P. 34.)

In every community subsisting wholly by trade, a variety of unfavorable circumstances affect the children of the poor, some of which are unavoidable, and others, and by far the worst, spring from vices that are always prevalent in a crowded state of society.

"To show how rapidly large towns would become depopulated, were they not constantly recruited by migration, and how fatal they prove to human life, even in circumstances otherwise the most favorable to its preservation, Dr. Percival procured an account of the mortality occurring in the Society of Friends in Manchester during seven years. In this Society he found there were 81 males and 84 females, of whom 54 were married, 9 were widowers, 7 widows, and 48 under fifteen years of age. The births in seven years were 34, the burials 47: one person, therefore, in 24.6 died annually. The result is curious, and the reverse of what was to be expected.

"Dr. P. ascribes so high a rate of mortality, proportionally higher than that of the whole town, to the Society, during the above period, having had little or no accession to its number of members from the country. Indeed, without a constant supply from this source, there is reason to believe large towns would be depopulated at even a speedier rate than in the instance just given." (P. 40.)

It has been shown by various respectable authorities that infantile diseases in general, and especially measles, have been more fatal since the cow-pox was substituted for small-pox. But, granting this fact, the inference that has been drawn from it, to the prejudice of vaccination, is neither logical nor correct. Immense numbers have been snatched from the extensive ravages of small-pox, and the victims to other maladies must necessarily be increased from the greater numbers of children affected by them. Dr. WATT, of Glasgow, indeed imagines that, when the small-pox was in full force, it had the power of modifying measles, and rendering them mild, but that now, as small-pox is nearly extinct, measles are become as dangerous as the former used to be. Whether erroneous or not, these sentiments of Dr. Watts are said by Dr. Roberton to have impeded the progress of vaccination in that country, and it is therefore of much consequence to expose their fallacy.

"Recurring to the fact, which the tables prove, that more die of measles now than died formerly, and that this change appears to be an effect of vaccination, does it follow that measles are in their nature become more severe and fatal? Dr. Watt, Sir G.

Blane, and Mr. Milne agree in the affirmative: the proofs they bring forward, however, are by no means satisfactory.

"It is not enough to show that more die of measles at present, than died previously to the vaccine period; a consequence to be expected, owing to the diminished mortality from small-pox. It should also be shown that, of a given number of cases of measles, a greater proportion dies now than died any time "when small-pox was in full force." Facts of this kind are not adduced, and had there been such in the possession of these gentlemen we may presume they would not have been withheld.

"The real cause of the increased mortality from measles and other infantile complaints may receive elucidation from the following considerations. Small-pox, owing probably to the greater abundance and virulence of its effluvia, was generally caught in a casual way, before measles and other infectious complaints, and swept off the more feeble and sickly, leaving the strong and vigorous only to encounter the attacks of other diseases." (P. 55)

In the second part of the volume, we have a slight sketch of the physical management of children. The various opinions stated by the author have been repeated over and over again by different writers. Their general accuracy we do not dispute, but the necessity for their republication we must be allowed to doubt. Mr. Roberton promises at a future period to offer some account of the diseases of children: we trust we shall be justified in passing a more favorable verdict on his second production, than we can conscientiously on that we have just noticed.

Diseases of the Bronchia; being the first Part of a Treatise on the Diseases of the Chest and on Mediate Auscultation. By R. T. H. LAENNEC, M.D. Regius Professor of Medicine in the College of France, Clinical Professor to the Faculty of Medicine of Paris, Physician to her Royal Highness the Duchess of Berri, &c. &c. &c. *Second Edition, greatly enlarged: translated from the French, with Notes and a Sketch of the Author's Life,* by JOHN FORBES, M.D. Member of the Royal College of Physicians, and senior Physician to the Chichester Infirmary. With Plates.—8vo. pp. 708. T. and G. Underwood, London, 1827.

THE first part of Laennec's work treats of the diseases of the Bronchia, Lungs, and Pleura; the second, of the Heart and its appendages. In speaking of these, no attempt is made to subdivide them into genera and species; still less is any endeavour made to ascertain what has been so absurdly called the proximate cause of disease. His object is to state the characters by which diseases may be recognised during life,—the traces which they leave after death,—and the treatment which multiplied experience has shown to be efficient.

When the disease is dependent upon change of structure, the description begins with this organic alteration.

The various lesions to which the textures of the lungs are liable are first noticed, and afterwards those diseases of function in which no change of structure can be detected, and which are therefore regarded as nervous affections.

The first book relates to diseases of the Bronchia, and the first chapter of this to their inflammatory affections.

Inflammation of the bronchia is divided into the *catarrhal*, the *plastic* or *crusty*, and the *ulcerous*. Pulmonary catarrh is again subdivided into, 1, the acute mucous; 2, the chronic mucous; 3, the pituitous; 4, the dry. The term catarrh is preferred to that of bronchitis, because it forms a link which unites inflammation to congestion, and because it is sometimes doubtful whether the disease be really an inflammation or not. Catarrh is very frequent; indeed, most persons are affected with it almost every year; yet LAENNEC thinks its nature imperfectly understood. Sometimes it resembles croup, but more frequently it exhibits the characters of a simple congestion. Its anatomical peculiarities consist in some degree of redness and slight thickening of the inner membrane of the bronchia; and these appearances very rarely occupy the whole even of one lung. The extent and intensity of the redness are not always in proportion to the severity of the attack. Thus, in the catarrh which complicates fevers, the membrane is of a livid red over almost its whole extent; while, in the idiopathic disease, it shows marks of inflammation only in certain points, even when very acute. The pulmonary catarrh is attended with a change of the bronchial secretion, which becomes scantier than natural, and is sometimes almost entirely suppressed. It next becomes thin, transparent, and acrid; then, without losing its transparency, it is more viscid, like the white of an egg. After this it assumes a yellowish or greenish colour, being at the same time more consistent; in which state it obstructs the air-tubes, giving rise to the mucous rattle. By the different characters of the expectoration in the successive stages are recognised the principal varieties of the disease: thus, the dry catarrh never proceeds beyond the first stage; the pituitous stops at the second; and the mucous persists in the third.

The symptoms are too well known to require description; and we shall only allude to those which are pointed out by Laennec as pathognomonic. When the catarrh is simple, however, violent percussion every where gives the natural sound. At the invasion of the disease, while there is as yet but little cough, the stethoscope indicates a rattle, which is often loud, and may sometimes be heard at a considerable distance from its site; it is usually sonorous and deep, but sometimes sibilous. As the disease advances, the rattle becomes mucous. If the disease be partial, the rattle also is partial; but, if this be heard over the whole of one lung, or the greater part of both, the disease is always severe; and, when it exists over the whole of both, death almost invariably follows.

Except in severe cases, little in the way of medical treatment is required. Even when the attack is acute, Laennec does not recommend blood-letting, except by leeches or cupping. Blisters he thinks injurious, except when the complaint threatens to become chronic. Our author alludes to the popular plan of treating catarrh with stimulating drinks, such as warm negus or punch, a method which he states to be eminently successful in a vast number of cases, and that he always employs this kind of treatment where there exists no contra-indications, such as inflammation of the stomach or bowels, a constitution easily excited by spirits, or an attack so violent as to threaten to pass into croup. His plan is to give an ounce or an ounce and a half of brandy in infusion of violets, made hot, and sweetened with syrup of marshmallows; which appears to us to be nothing more than prescribing a tumbler of warm brandy punch.

The anatomical characters of the chronic catarrh are extremely similar to those of the acute, and the expectoration of the former is precisely similar to that of the advanced stage of the latter: the quantity, however, is almost always greater than in the acute disease, occasionally amounting to one or two pounds in twenty-four hours. The treatment most approved of by our author, especially in old persons, is the establishment of a permanent drain in the arm, or thigh, with the use of certain aromatics, squill, and paregorics. Our author also speaks favorably of emetics, repeated according to the patient's strength and power of supporting them. We can ourselves bear testimony to this point from considerable experience. When the lungs are oppressed by an excessive accumulation of viscid mucus, and the expectoration very difficult, we know of no remedy capable of affording so much or such speedy relief. For this purpose the sulphate of zinc has appeared to us the most efficacious medicine: it generally requires to be given in doses of a scruple or half a drachm; and, when free vomiting has been produced, the patient frequently passes a good night, and remains for a day or two comparatively free from complaint. After this the symptoms gradually return, and the remedy requires to be repeated.

"In the case of an old lady of eighty-five," says Laennec, "who had laboured under chronic catarrh for eighteen months, with an expectoration amounting to two pounds daily, I prescribed fifteen emetics in one month, and with complete success, as the patient lived eight years afterwards free from the complaint."

The author likewise speaks favorably of the balsams of tolu and copaiba, and of turpentine.

The name of *pituitous* catarrh is given to that variety of the disease in which the expectoration is "colourless, transparent, ropy, frothy on the surface, and underneath like white of egg diluted with water." It is considered by our author as intermediate between the serous and sanguineous congestions, exhibiting a middling degree of swelling, and slight softening of the mucous membrane, with some redness here and there. The acute and chronic forms are thus described:

"The *acute pituitous catarrh* constitutes one of the severest species of the suffocative catarrh. It is characterised by an extreme oppression, attended by a copious pituitous expectoration. It sometimes begins as a common cold; but after a few hours, or even minutes, its severe character is soon declared by the violence of the cough, the intensity of the dyspnœa and oppression, the lividity of the face, marks of cerebral congestion, disordered circulation, and coldness of the extremities. In children it is sometimes mistaken for croup. I had occasion to know a case of this kind lately, where, on examining the body after death, we found the bronchia hardly at all red, but nearly filled with a serous fluid, which was somewhat viscid and slightly frothy.

"The stethoscopic signs of this affection are the varieties of rattle already noticed. To these may be added the occasional presence of a crepitous rattle, produced by a certain degree of œdema of the lungs co-existing with the serous discharge. The chest sounds well on percussion.

"These attacks, however violent, are usually transient. In certain cases they are recurrent. A remarkable instance of this is given by Bree, of a woman attacked in perfect health with a paroxysm of the kind described, passing entirely off after a few hours, and returning in the same manner and with extreme violence, after an interval of six months. In the second attack, this patient expectorated four pints of a frothy serum slightly tinged with blood. I shall notice the treatment of this complaint when I come to treat of the suffocative catarrh.

"The *chronic pituitous catarrh* occurs only in advanced life, and more particularly attacks those whose constitutions have been debilitated by excesses, or by sedentary habits. It is common in gouty subjects in whom the gout has lost its regular form, and become less strongly marked. It is also the consequence of frequent attacks of the acute mucous catarrh. The chronic variety never succeeds the acute species which we have just described. It usually comes on by slow degrees after repeated attacks of the acute mucous or dry catarrh. When the pituitous discharge is once fully established, it becomes frequently intermittent, and often with considerable regularity. There are usually two paroxysms of cough and expectoration in the twenty-four hours,—the one on waking from sleep, the other in the evening; but sometimes the paroxysms immediately follow the patient's meals. The quantity of fluid expectorated is always very great: I have known some patients discharge, in the course of one or two hours, from two to three pounds.

" During the attack there is always dyspnœa, which either diminishes or passes off with it. When this disease has existed some time, the countenance assumes a pale blueish tint, and the body becomes considerably but not extremely emaciated. The patient's constitution becomes more lymphatic; the blood grows thinner, and, when drawn from the veins, exhibits a very weak coagulum. The patient nevertheless continues fit for many avocations, and can be considered only as an invalid. In this state the complaint may exist a great many years, but, as age advances, the fits become longer and more frequent, the dyspnœa becomes habitual, and the disorder then acquires the name of *asthma*. The usual termination of it is by the supervention of œdema of the lungs, and finally suffocation from inability to expectorate.

" It is singular how many years patients will survive under the immense discharge produced by this disorder. M. Alard mentions some interesting examples of this kind; and I myself am acquainted with two old gentlemen, whose cases may be added to the number. One of these, who is upwards of seventy, has expectorated during the last ten or twelve years, in two daily paroxysms, about four pounds of a colourless ropy and frothy fluid. The other brings up every morning, by gentle spontaneous vomitings, repeated at short intervals during several hours, from three to six pounds of a liquid exactly like the white of egg mixed with a third part of water. This gentleman is upwards of sixty, enjoys tolerable health, and walks several hours every day. Some patients, however, die of exhaustion within a much shorter period, and from a much smaller discharge. Two cases of this kind are given by M. Andral:—the one, an old man, carried off after five months, by an expectoration of about two pints of a serous fluid, daily;—and the other, a person of forty-five years of age, who died after bringing up three pints of the same kind during three successive years. In neither of these cases was there found any other cause of death; and, in the one last mentioned, the mucous membrane of the bronchia was found extremely pale: so true it is that, besides the light, no doubt very great, thrown by morbid anatomy on the causes of these diseases, we must, in certain cases, look elsewhere for information.

" It is rare that we meet with idiopathic cases of this disorder so well marked as those just noticed; but it often exists in a high degree as a consequence of the simultaneous development and persistence of a great number of miliary tubercles in the lungs. These pituitous discharges were indeed considered by Bayle as the pathognomonic sign of this variety of phthisis. The symptomatic pituitous discharges are marked by less regular fits of coughing, and they present, moreover, particular signs, depending on their organic cause, which will be noticed when we come to treat of phthisis." (P. 80.)

When this disease has become habitual, it is but little under the control of medicine. The same remedies, however, may be tried which we have mentioned as applicable to the preceding variety.

The *suffocative* catarrh of Laennec seems to consist rather in the termination of the several species, from interruption to the function of respiration, rather than in any thing which can be looked upon as a distinct disease.

The *dry* catarrh is that which is attended with little or no expectoration. In the acute state, it is only one stage of a common cold: in the chronic form, it is extremely common. The anatomical characters are swelling of the mucous membrane, with redness of a violet hue. The minute branches are frequently blocked up by a very glutinous secretion, disposed in globules, which are of a pearl grey colour. The pathognomonic signs of this affection are perfect resonance of the chest, and a want of the natural sound in the parts actually affected. The respiration continues natural in the parts of the lungs which remain sound, but frequent changes take place, so that the part which at first gave no respiratory sound may, after a short time, give it very distinctly, and vice versâ. The symptoms are thus described:

" This disease, when existing in a middling degree, frequently remains altogether latent for a long course of years, the subjects of it being no further conscious of its presence than by observing that they are shorter breathed than others, when they ascend an elevation or attempt to run. When the bronchial tumefaction becomes more extended, dyspnœa is then experienced, even in a state of quietude, and particularly after meals; and this state of oppression is referred by some patients to one side only, and sometimes to the side least affected. After a time, the dyspnœa comes on in fits, which last usually several days, and are so severe as to merit and obtain the name of asthma. Towards the termination of these attacks, a cough comes on, and the oppression becomes less; and, after the cough has continued a few days, the dyspnœa is still further relieved by the expectoration of some of the pearly sputa, intermixed with phlegm. In the slighter cases, these sputa lose their usual consistence and globular form, and become more copious, and feebly opaline from an intimate intermixture of a small quantity of an opaque yellowish or whitish mucus. At other times they are vitriform, and nearly of the consistence of the vitreous humor of the eye, constituting, no doubt, the glassy pituita of the ancients. An expectoration of this kind is habitual with many persons affected with a slight degree of the dry catarrh; and, as long as it continues, they are never liable to attacks of asthma. Frequently this expectoration is in such small quantity that the patients are themselves unconscious either of it or the cough; in some persons there is, in fact, neither the one nor the other; and in many there is merely a slight cough, perfectly dry, and perceptible only once daily, or once in two or three days. Coughs of this kind, when the dry catarrh of which they are the symptom has come on slowly and without being preceded by an acute affection, are usually denominated nervous. Too frequently, indeed, they are considered sympathetic, and the cause of them is sought for in some real or supposed affection of the stomach, liver, kidneys, or uterus. Hence the coughs called gastric, hepatic, hysteric, &c.; all of which are, in fact, examples of the coexistence of the dry catarrh with some affection of the particular organs indicated. Very commonly the cough ceases entirely during summer, and the oppression becomes less: no doubt because the increase of the cutaneous transpiration diminishes the gorged state of the bronchia and the secretion of the pearly sputa.

"When a person subject to an habitual dry catarrh is attacked with an acute catarrh, this rarely goes through its regular course, so as to give rise to the copious mucous expectoration characteristic of it. On the contrary, it seems never to get beyond the first stage; but after a few days the cough becomes more frequent, and is attended by a slight pituitous expectoration, and a greater discharge than usual of pearly sputa of a thinner quality. Sometimes, indeed, their consistence is so much diminished that they lose their rounded form and become diffluent; and in this state they exhibit a compound of the pearly and glassy sputa, and the yellow and viscid mucus of common catarrh, rendered opaque and greyish by the intermixture of much black pulmonary matter. The supervention of the acute catarrh usually brings on a fit of asthma, or at least aggravates the habitual dyspnœa. This is relieved by the appearance of the expectoration; but it frequently still continues worse than before the invasion of the new affection. If fever comes on in the course of the acute catarrh, it perceptibly lessens the oppression. The same is true of sleep; and, if this ever comes on during an asthmatic paroxysm, the moment of awaking is the only one in which the patient fancies that he can breathe freely. Nevertheless, even during these intervals of ease, the respiration, examined by the stethoscope, is not at all more perfect than during the severest paroxysms; a fact which proves that both fever and sleep act in this case by diminishing the necessity of respiration. The upright posture is not so constantly requisite in cases of asthma depending on the dry catarrh, as in oppressed breathing produced by diseases of the heart or effusions into the chest. After an extensive dry catarrh has continued for a certain length of time, and more particularly if aggravated by repeated attacks of the acute kind above described, emphysema of the lungs supervenes, with its characteristic signs and symptoms. The name of *neglected cold*, usually given to phthisis, is therefore much more applicable to this latter affection.

"The dry catarrh is denominated *latent* when it is unattended either by cough or expectoration. This variety is distinguished by a very great, and usually unequal, feebleness of the respiratory sound over the greater part of the chest; by the complete sonorousness of this cavity on percussion; and by the occasional, though rare, addition of a slight sibilous or obscure mucous rattle, or very feeble sound of the valve: these last signs are of such infrequent occurrence that we may explore the chest several days successively without perceiving them. The dry catarrh is almost always latent, particularly when slight and of small extent. It only then becomes an inconvenience when the tumefaction of the bronchia has increased sufficiently, either in extent or intensity, to impede the full development of the lungs required during exercise.

"The symptomatic catarrh of fevers is almost always latent, particularly during the first days of the disease: not but that the patients, in this case, cough occasionally; but the cough is so slight and infrequent as to be either unattended to or altogether overlooked by the physician. It is sometimes, however, noticed by the attendants, when unobserved by the practitioner. After continued fevers, and mucous catarrhs of long standing or frequently renewed, habitual latent dry catarrhs are left, which eventually terminate in the production of asthma and emphysema of the lungs.

"The frequency of the dry catarrh, the insidious slowness of its progress, and the severity of its effects when arrived at its height, ought to convince us how necessary it is not to consider as unimportant affections dry coughs of long standing, however slight or infrequent they may be. These coughs, as I have already said, are the consequence of the dry catarrh, except in the particular case wherein they are caused by the development of miliary tubercles in the lungs." (P. 89.)

The remedies which are most useful in the other forms of catarrh, are unavailing in this. The indications are to relieve the vascular congestion, and to promote expectoration: with regard to the first, blood-letting is regarded by Laennec as useless, while blisters, emetics, and purgatives, afford but temporary relief; the second indication, according to our author, is best fulfilled by the use of alkalies; on which subject he thus expresses himself:—

"As to the second indication, the removal of the pearly sputa, it is evident that the glutinous tenacity of these is the chief obstacle to their ready expulsion; and I am of opinion that we possess means, if not infallible, at least often efficacious, in lessening this tenacity of the secretions, and rendering them more liquid. This practice may perhaps seem to rest on the exploded humoral pathology, and I must confess that the theory of it is neither mine nor of this age. Sarcone and Morgagni, after many others, made this theory one of the bases of their practice. I attach no value to it as a theory; but I can state from experience that, by means of those medicines which the chemical and humoral physicians of the last three centuries considered as proper to correct the tenacity of the fluids, I have succeeded in procuring very great and permanent relief to many individuals who had long laboured under dry catarrhs of great severity. The means employed with this view are chiefly the milder or very dilute alkalies. Those I have been in the habit of using are the following:—1. Almond soap, taken in the form of pill with the patient's meals, to the amount of from half a drachm to a drachm daily. If the catarrh is complicated with spasm of the bronchia (to be noticed hereafter), I sometimes conjoin with the pills the gum ammoniac, in the dose of from eight to twenty-four grains in the day. 2. The salt-water bath, of the temperature of from ninety-three to ninety-nine degrees of Fahrenheit; the artificial alkaline bath, with four ounces of the carbonate of potass or soda; and the sulphur baths, natural or artificial. I give the preference to the last in herpetic cases. 3. The internal use of the carbonates of soda, potass, or ammonia, in a dose of from twelve to thirty-six grains per day, diffused in all the patient's drinks; or the sulphureous saline mineral waters, particularly of Bonnes and Cauterets.

"The employment of these means ought to be persevered in for several months at least, even when they afford the most speedy relief. I have never observed any ill effects from them, and I have frequently employed the soap, more especially, for two or three years without intermission. A great many persons, who had already emphysema of the lungs, and either incessant dyspnœa or very frequent fits of asthma, have, to my own knowledge, been restored, under this kind of treatment, to a state of health so comfortable, that they hardly exhibited any signs of disease, and considered themselves as entirely cured. After the employment of these means for a certain period, the pearly sputa become more abundant; or if there had been previously no expectoration of the sort, this now takes place. At the same time the tenacity of the sputa is diminished; they become diffluent, and lose their rounded form; and relief of the oppression is experienced. This plan of treatment is often most efficacious where the disease is most severe. I know not what may be thought of the theory on which it is founded. Animal chemistry is yet too imperfect to furnish the solution of the problem. No doubt it would be better if we could dispense with all theory; but this is impossible: the numerous and diverse facts which constitute the science of physic can only be classed in the memory by the aid of some systematic bond. It is, indeed, much to be desired that less importance were attributed to views, which, after all, can only be considered as the scaffolding of the science; and more especially is it to be wished that the attachment to theory would not lead many persons (as it does) to reject the very facts on which other theories, whether ancient or modern, hostile to their own, are founded." (P. 92.)

Convulsive catarrh, or hooping cough, is next spoken of. Stethoscopic exploration affords only the usual results of common catarrh. The peculiar sonorous respiration depends entirely upon the larynx and neighbouring parts. With regard to the treatment, it is observed that, if the patient can be made to drink by small and repeated portions during the paroxysm, this is diminished in violence, the effects of deglutition probably counteracting the spasm. As an emetic, Laennec prefers tartarised antimony to ipecacuanha; and, of the narcotics, he thinks belladonna the best. The dose is from an eighth to half a grain. When the paroxysms become periodical, bark or quina are recommended. He has seldom found blisters of much use.

Symptomatic catarrhs are those which habitually coexist with various other diseases. It is asserted, for example, that a catarrhal affection, either latent or manifest, exists during the whole course of continued fevers: in the exanthemata, the catarrh is equally constant, and more manifest; and even during the paroxysms of ague, symptoms of catarrh, it is said, may be detected by the stethoscope.

Dilatation of the Bronchia is the organic lesion next described. Sometimes this exists in one or many branches, without any other appearance of disease, and then dilated portions frequently arise from a trunk much smaller than themselves: occasionally they resume their natural size, but more frequently they terminate in a cul de sac. When this lesion is confined to the smaller branches, it is very easily overlooked in dissection. Dilatation of the bronchia has many symptoms in common with other diseases, particularly phthisis, and, although Laennec asserts that an experienced practitioner can never have any difficulty in the diagnosis, yet it is acknowledged by his ingenious translator, as well as by M. Louis, that it is extremely difficult to distinguish them. For this reason we shall say nothing of the treatment.

The next chapter is devoted to the consideration of *Croup*, and the only part of it to which we shall allude is that which relates to the treatment.

"If croup is not accompanied by a strongly marked asthenic diathesis, or does not occur in very young infants, the treatment ought to commence with one or two bleedings from the arm or foot. In doubtful cases, it would seem preferable rather to omit bleeding than to destroy, by injudicious depletion, the powers requisite for the separation and excretion of the false membrane. Blood-letting, indeed, in this, as in all other diseases which have reached the period of suppuration, is rather a preventive of future mischief than a measure likely to lessen that which already exists. And, in fact, in the case in question, the danger arises much less from the inflammation than from the mechanical obstacle to the respiration occasioned by the false membrane. In children, leeches to the throat, repeated more or less frequently according to the strength of the patient and the severity of the disease, may advantageously take the place of venesection; and, in adults, their repeated application may be useful after general bleeding has been had recourse to. Leeches have the advantage of producing, in addition to the unloading of the capillaries in the vicinity of the affected part, a sort of local eruption, which unquestionably is sometimes beneficial as a derivative. Other derivatives, however, and of the most energetic kind, must be put in requisition, particularly blisters and sinapisms. These are, in general, more advantageously applied to the lower extremities, than in the vicinity of the disease. Good effects have, nevertheless, been obtained from the application of a cataplasm wetted with muriatic acid to the anterior part of the larynx. All practitioners who have had occasion to see a good deal of this disease, will readily admit that these measures, although very rational and conformable to the results of experience in the treatment of inflammatory diseases in general, are nevertheless rarely sufficient, and that very few well-characterised cases have yielded to their influence. Others have consequently been had recourse to. I shall here notice those only which have been found decidedly beneficial. Of this kind are emetics, repeated daily, or even twice a day. They evidently accelerate the separation of the adventitious membrane, and favor its expulsion. However valuable this treatment may be,—and I have myself obtained cures which I could attribute to it alone,—it is no doubt too true that the greater number of cases still prove fatal, even when it is called in to aid the means already detailed. The internal use of hydro-sulphuret of potass was, some years since, cried up as a sort of specific in croup. It is one of the ancient family of the alkaline resolvents, by which the chemical physicians, followers of Sylvius of Leyden, proposed to correct the too great plasticity or viscidity of the fluids, and even to dissolve concretions already formed. I have before spoken of this alkaline treatment. In the present case it is sufficient to remark, that its effects are too slow to be of any use in a disease of such rapid progress as croup. In small quantity, its effects are insignificant; and, in larger and more repeated doses, it must be more injurious as an irritating, acrid, and almost caustic substance, than it can be beneficial as an alkaline remedy. Pretty numerous successful results have been obtained from mercurial frictions, exhibited in such doses as speedily to produce salivation; and, in the actual state of the science, I think no prudent practitioner ought to neglect this method, conjointly with blood-letting and emetics. The efficacy of this practice, even in a very striking degree, cannot be questioned in many other inflammatory diseases, particularly hepatitis and peritonitis. Still the success of even the mercurial treatment is not sufficiently great to hinder us from looking for other means; and if I had had occasion to treat this disease since I have experienced the efficacy of tartar emetic in large doses in many inflammatory diseases, I would certainly have had recourse to it with considerable confidence." (P. 125.)

The most remarkable circumstance in this extract is the assertion that the danger depends upon the mechanical effect of the false membrane, rather than the inflammation which gives rise to it; and, influenced by this opinion, the emetics are given to "favor its expulsion." Whereas, it is but too well known that the case will prove fatal if the inflammation be not subdued, even although the false membrane has been ejected. The manner in which mercury is spoken of in the form of friction, sufficiently shows that our neighbours either are ignorant of, or hesitate to adopt, the full and free doses of calomel which in this country have been found so efficacious.

Bronchial Hemorrhage is the term employed to designate the spitting of blood which proceeds from a simple exhalation from the surface of the mucous membrane. When tubercles burst into the bronchia, the slight bleeding which accompanies this accident arises from the rupture of small vessels, and hemorrhages of much greater extent follow the bursting of a vessel which traverses a tuberculous excavation; but it is now well ascertained that the greater number of cases of slight hæmoptysis consist in an exhalation from the bronchial membrane. In examining patients who have died during this disease, blood is found in the bronchia in greater or less quantity; the mucous membrane is generally softened, and stained with blood through its whole thickness. The discharge is small, and the blood frothy. The profuse hemorrhages, commonly called vomiting of blood, arise in most instances from pulmonary apoplexy, or that more severe disease originating in the vesicular structure of the lungs.

In bronchial hemorrhage, the chest is perfectly sonorous, and there is no crepitous, but only a mucous, rattle. The treatment recommended by our author—

"Consists most commonly in the more or less repeated use of blood-letting. Taking blood from the foot is generally preferable in women when there is suppression of the catamenia. When the detraction of much blood is not requisite, the application of leeches to the inner side of the thighs, or below the ankles, may be substituted. I give these places the preference to the vulva, for various reasons; and, among others, because I am convinced, from many comparative trials, that leeching from the last-mentioned place is not more effective as a derivative than from the other two, particularly if the blood is taken from both at the same time. Dry cupping or with lancets, sinapisms, stimulating foot-baths, may be usefully employed after venesection, or in cases where this is not necessary.

"Rest and absolute silence, a cool air, abstinence from wine and stimulant food, and a regimen proportioned in strictness to the severity and extent of the hemorrhage, are accessory measures by no means to be neglected. The same remark applies to the use of mucilaginous drinks, such as decoction of the roots of Grande Consonde or marsh mallow, rice water, solutions of gum arabic or tragacanth, &c. Acids and astringents are also commonly employed, particularly l'eau de Rabel, or the sulphuric acid sufficiently diluted, alum, tormentilla, bistort, kino, pomegranate bark, and, of late, rhatany root and its extract. These means are more hurtful than beneficial at the commencement of the hemorrhage; but they may sometimes be advantageously employed in old cases, which are combined with an atonic state of the system, or when the blood is only slightly coloured and feebly concrescible. In this last case I have sometimes used with benefit the dry sulphate of iron. To derive advantage from astringents, they must be given in larger doses than is usual. I give, for example, from one to four drachms of alum in a pint of any sweet mucilaginous drink.

"When an active hæmoptysis is checked, Sydenham advises the patient to be purged, and looks upon this means as most likely to prevent a relapse. I have always adopted the same practice, (except when evidently contra-indicated,) and, as it appeared, frequently with advantage. Obstinate spittings of blood, which have resisted repeated bleedings, sometimes terminate instantaneously under the effect of a purgative. (P. 129.)

Polypus of the Bronchial Membrane is so rare a disease, that Laennec has only met with three examples of it on record. He mentions having seen a concretion in one of the large bronchia, which might easily have been mistaken for a polypus: although it almost plugged up the left branch, it neither impeded respiration on this side, nor prevented pectoriloquism in a cavity in the upper lobe.

Ulcers of the Bronchia. This also is a rare affection, although our author thinks that it would be more frequently discovered if we were in the habit of examining the bronchia with greater care. The part of the membrane in which ulcers have been most frequently observed, is between the point where the trachea enters the thorax and its bifurcation. The size of the ulcers varies from a few lines to an inch and a half: they are of a grey colour, and covered with puriform mucus. The symptoms are—

"A pain, at first slight, or a simple feeling of irritation at the bottom of the trachea, experienced momentarily, and sometimes only when the patient sings, cries, or raises the voice in speaking. This state may continue a long time. I know a lady who has suffered in this way for ten years, without any other apparent alteration in her health. She has tried various means, and particularly the most powerful issues, without effect, and has only found relief in preserving absolute silence. After a time, the pain becomes constant, even when the patient is silent; and even then it is found that the voice is not always perceptibly altered in its character. Cough soon supervenes, attended by a colourless, ropy, pituitous expectoration, intermixed with opaque puriform particles. When this becomes abundant, a rattle, perceptible by the naked ear, is heard in the trachea; and, when not so heard, I have found it very distinct by means of the stethoscope. This instrument detected it at the same time in various parts of the lungs, while in many points it discovered the respiration to be very feeble. This was owing probably to the accumulation of phlegm in the smaller bronchia, since the respiration became good after expectoration. These symptoms are soon accompanied by extreme dyspnœa, the patient being obliged to remain in the sitting posture night and day; and, when he awakes after an imperfect sleep, he is apt to be seized with a suffocating cough, as if some foreign body had got into the trachea; and this continues until after the expectoration of a certain quantity of mucus. At this stage, emaciation, which had hitherto been slow in its progress, makes rapid advances, and sometimes produces extreme extenuation; and the patient at last dies with all the symptoms of the suffocative catarrh.

"Very great efforts of voice, acute cries, violent forcing of the head backwards, have sometimes appeared to be the occasional cause of the ulcers of the trachea. Cutaneous complaints and syphilis would seem also to predispose to them. Although sometimes met with in phthisical cases, they are found more commonly in subjects whose lungs are entirely sound. We must, however, except those cases where ulceration of the trachea or upper part of the bronchia is occasioned by the rupture of softened tubercles, situated in one of the cervical or bronchial glands. But ulcers of this kind cannot be considered as at all of an idiopathic nature, being entirely analogous to those fistulous openings produced by the discharge of a tubercle, abscess, or gangrenous eschar of the lungs, into the branches of the bronchia. Ulcers of this kind have a great tendency to cicatrisation, and are found after a certain time smooth, polished, and without any appearance of spreading. The tracheal ulcer, on the contrary, appears to have no tendency to cicatrise; and I know of no well authenticated instance of the cure of this affection." (P. 134.)

The treatment consists in the employment of local drains, particularly the repeated application of small moxas on the anterior and lower part of the neck; together with the preservation of absolute silence on the part of the patient.

The cartilaginous rings of the bronchia become occasionally ossified in old persons, but no perceptible alteration in the function of the lungs is connected with this change.

Foreign Bodies in the Bronchia.—

" Morsels of food, pins, needles, pieces of wood, stones of fruits, sometimes get into the bronchia. Violent irritation, convulsive cough, and (if the foreign body is large) threatening suffocation, are the immediate consequence of this accident, which is, nevertheless, unattended by any very immediate or pressing danger, unless the body introduced is sufficiently large to obstruct, more or less completely, the larynx or trachea. Cough, accompanied by a mucous or bloody expectoration, is the most usual symptom which supervenes to the accident; but even this soon passes off, particularly if the substance is small and falls down into a bronchial ramification: the organ becomes accustomed to the foreign body, and no inconvenience is produced by it.

" Accidents of this sort arise from very various causes. I was myself witness to a very singular case of the kind. Professor Corvisart, being desirous of exercising an unexpected supervision of some part of the clinical hospital, came to it one evening contrary to his custom, and suddenly entered the apartments of the steward, who had been indulging in a too plentiful repast. Taken by surprise, the man becomes sick at stomach, but, making a violent effort to repress vomiting, he falls to the ground and expires. On examining the body, the larynx, trachea, and bronchia are found filled with half-digested food.

" The ancient pathologists regarded foreign bodies introduced into the bronchia in a state of powder, as the cause of several severe diseases of those canals, as well as of the substance of the lungs; and, among others, of phthisis pulmonalis and the chalky concretions of the lungs, bronchial glands, or bronchial tubes. This opinion appears to me altogether without foundation. It is imagined that stonecutters and lapidaries are particularly subject to formations of this kind, occasioned by the inhalation of the dust amid which they work.

" It is needless to remark that this dust is entirely unlike the cretaceous formations in the lungs. On this subject it deserves notice that stage coachmen, who spend their life amid much more dust, are usually healthy, or suffer only from diseases produced by intemperance and the inclemency of the weather. It is indeed singular how little sensible the mucous membrane of the bronchia is to solid matters when reduced to an impalpable powder, when we know that the introduction of a body only a little larger, such as a bit of sugar, or even of a gummy or albuminous fluid, occasions extreme irritation and cough. Every one is occasionally caught in a cloud of dust, and merely experiences, while breathing in it, an oppression, without any inclination to cough. It is well known that, when we have been for some time breathing an air loaded with dust or smoke, these foreign bodies are, after a certain time, expectorated with the mucous secretion of the bronchia.

"For these reasons I consider the chalky formations in the bronchia, as well as every accidental production in the living body, as the result of perverted secretion. These productions in the bronchia I have only met with in branches which are dilated, or in the vicinity of old tuberculous excavations cured by the formation of a fistula or cartilaginous cicatrice; and we shall find hereafter, when treating of phthisis, that the development of cretaceous matter frequently succeeds that of tubercles." (P. 136.)

Diseases of the Bronchial Glands. These differ from all other lymphatic glands in their colour, which, in their centre at least, is a deep black, even in those whose lungs are perfectly sound. The colouring matter is united with the lymph, and, if a drop of it be applied to the skin, the stain is removed with difficulty. Inflammation of these glands appears to be very uncommon, and Laennec has seen very few cases in which they had run on to suppuration. Calcareous matter, however, and tubercles, are very common; and the glands sometimes attain the size of a hen's egg, several uniting into one mass. The tuberculous matter softening is either removed by absorption or by an opening into the bronchia; but the development of such tubercles is of little importance, provided the lungs are free from them. It is scarcely necessary to say that the natural black colour of the bronchial glands must not be confounded with Melanosis; a mistake which appears frequently to have occurred.

(To be continued.)

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

ANATOMY.

Congenital Absence of the Gastrocnemii Muscles.—A CHILD, seven years of age, complained of weakness and lameness of the left leg. From want of power in the limb to support her, she frequently fell. The bones of the leg were found perfect. The back part of the leg, where the calf is usually situated, was perfectly flat, arising evidently from the absence of the gastrocnemii muscles and their tendon. Beneath the skin were felt some tendinous fibres adhering to the bone, but considerably less than the tendon of Achilles. When an effort was made to extend the foot, and to rest upon the heel, the flexor muscles, not being opposed by the gastrocnemii, immediately reflexed the limb. This circumstance had previously been supposed to depend upon weakness or convulsive action of the leg, but the real nature of the case was now determined.—Two other similar instances are related by the same author. (PALETTA, *Exercitat. Pathologicæ*, vol. i.)

PHYSIOLOGY.

Case of Premature Growth.—B. Eckhofer, born in 1806 of healthy parents: her mother had six children, all of whom had been very robust. At birth, she was twenty-three inches long, and weighed about two pounds more than usual. The fontanels of the cranium were not at all ossified. From the eighth day the mother's milk was found insufficient, and broth was given. A fortnight after birth, four teeth appeared; but, excepting the unusual size of the child, nothing extraordinary was remarked until the seventh month, when she was weaned, and, although her food was not of a very digestible quality, her health continued good. She now began to walk. The incisor teeth protruded through the gums, and the hair, which had hitherto been fair, became dark, and grew so fast as to reach the middle of the back. At nine months old she menstruated, and, in fact, exhibited every sign of puberty. The first time, the discharge continued for seven days, and occurred regularly until her death, which took place when she was twelve years of age. After the ninth month she did not for some time grow so rapidly, but at six years of age she was three feet nine inches in height, and weighed fifty-four pounds. It is remarkable that, notwithstanding the general development of the body, and of the organs of generation in particular, she never exhibited any sign of sexual instinct. (*Allgemeine Deutsche Leits. fur Gebactskunde.*)

How to procure Animals of either Sex.—M. GAROU DE BUZAREINGUES published, in 1825, some experiments relative to the reproduction of various domestic animals, more particularly of sheep. In a late Number of MAGENDIE's Journal, he has resumed this subject, and has related the result of some experiments made with two separate flocks of sheep. In addition to these, there are many observations on the same subject applied to mares and cows; but the most important relate to sheep.

A flock of sheep was divided into two equal portions, and a smaller or greater number of male or female lambs were to be produced, at the will of the proprietor, in each of these. The plan adopted in order to insure this result, was to employ very young rams in that division of the flock from which it was desired to obtain females; and strong and vigorous rams, of four or five years of age, in that from which males were to be procured. The first division was also recommended to have a more abundant supply of food, and more repose than usual, during the period of impregnation. The following table will show the effect of the first experiment:

	Sex of the Lambs.	
Age of the Mothers.	Males.	Females.
2 years	14	26
3 years	16	29
4 years	5	21
5 years and upwards	18	8
Total	55	84

At another farm:

2 years	7	3
3 years	15	14
4 years	33	14
5 years and upwards	25	24
Total	80	55

Another experiment is thus related:—A flock of 106 sheep was divided into two sections of forty-two each, one containing the strongest ewes, of four and five years of age; the second, consisting of the weakest, either less than four or more than five years old: the first section was intended to produce a greater number of females than the second; and after having been marked, and placed in a good pasturage, four rams, of about ten months old, were turned into them. The other section received two strong rams, each aged more than three years. The remainder of the flock, making up the number of 106, belonged to the shepherds; they are generally stronger and better nourished than the rest, and these, forming a third section, were placed under circumstances similar to the second.

The result of the lambing was thus:

	Males.	Females.
First section	15	25
Second section	26	14
Third section	10	12
There were four double births; two of which, in the first section, produced		4
The two others, belonging to the second and third sections, produced	3	1

It is to be remarked, that the lambs proceeding from the section in which the young rams were employed, were in all respects as fine as those begotten by the older and stronger rams.

In connexion with this part of the subject, we find, in another part of the communication, a remark of some importance. In 1825, twenty ewes, which had not borne for two years, received the rams clandestinely in the beginning of the winter; they were almost all of them remarkably fat; they produced sixteen females and four males. Among the number of these ewes were two old ones, which had been put up to fatten in 1824, but could not be sold because they were not in sufficiently good condition: these gave one male and one female.

M. Garou next carries his inquiries to the reproductive power in the mare and cow. Respecting the first of these he observes, that, wishing to obtain more female than male colts, he fed his brood mares on fresh food; that he chose for propagation only such as had not been foaled or even nourished by the mother the preceding year; and he did not give them the stallion until they gave evident signs of being in heat. Five mares, so chosen, produced five female colts; and, by following the same method, out of thirteen colts foaled that year, eleven were females; and one of the two males was the product of an old mare. He remarks, that some mares of a remarkably vigorous appetite always bring forth females; whilst those of delicate health as constantly produce males. The same remarks apply to the cow.

PATHOLOGY.

Talma's Heart.—The great French tragedian died of stricture of the rectum, which reduced that intestine to the diameter of three lines, causing great accumulation above it, and ultimately rupture of the coats, with effusion into the peritoneal cavity. He laboured under another complaint, however, which must sooner or later have caused his death, and which is more interesting as having been more immediately connected with his profession. The heart adhered to the pericardium at its apex, forming a dark-coloured tumor, connected with the left ventricle, and which in reality was a true aneurism. The walls of this sac appeared to consist of the pericardium and serous membrane of the heart glued together, and containing layers of fibrin, while the muscular fibres of the ventricle, considerably attenuated, were partially extended over the tumor. The size of the aneurism was about that of a small egg; it had displaced the point of the left ventricle, which was thus thrown a little forward. The origin of this pathological condition of the heart, which was not suspected during his last illness, may perhaps fairly be dated from the following occurrence related by Talma's family:

Some years ago, after great exertion in playing the character of Hamlet, he suddenly felt a sensation of burning heat in the region of the heart, and an uneasiness which lasted one or two days, but which did not attract any serious attention. From this time he frequently suffered from palpitation, particularly after professional exertion.

It is probable that, in a mind like Talma's, passions, though artificially excited by the cunning of the scene, and the intense and absorbing manner in which he entered into the character he represented, may have produced the same effect upon his frame, as moral impressions from external causes are wont to do on others; thus assimilating in their effects the real and imaginary in the miseries of life. It is probable, too, that had this great tragedian not laboured under the obstruction which proved fatal, he would have expired in one of those tempests of passion which held the spectators in dreadful admiration, and thus (to borrow the enthusiastic language of his countryman) he would have died *au milieu de la gloire!* (*London Medical Gazette.*)

Death from the Sting of Bees.—M. Bertrand, thirty-four years of age, and of a good constitution, was attacked by a number of bees: they fixed upon his breast and face, causing considerable pain. He ran from the spot, but the bees pursued him, and continued to sting him. They were soon driven off, but he declared that he felt himself dying, and fell down almost immediately. He was found by the surgeon stretched upon a mattress, pale, and breathing feebly and interruptedly. His pulse was scarcely perceptible, and the surface of his body was cold. Under the extraordinary idea that this state arose from impending suffocation, and that a bee might have entered the trachea, the operation of tracheotomy was immediately performed; but the unfortunate gentleman died almost instantly, and not more than ten minutes after the receipt of the injury. No examination of the body was made.

Artificial Anus.—A woman, at the termination of a labour which happened twenty years before, had had an umbilical hernia, which, not being kept reduced, had gradually increased, till at length it acquired so considerable a size, that in the course of ten years the whole of the intestines appeared to be situated in a kind of pouch. At the end of the second year, the skin became red at the lower part of this, and ulceration took place, and in a short time a round opening was established, about the size of a five-franc piece. The circumference of this soon healed, but the centre of it remained pervious, and discharged pus, serum, and blood. During the ten years which had elapsed from the appearance of this ulceration to the time of her seeking medical aid, the aperture had healed up and opened again several times. The movement of the intestines could be seen through the integuments of the tumor. She was still able to continue her employment. Some time afterwards, however, she perceived that a portion of food which she had taken issued from the wound, three hours after it had been swallowed. Upon pressing the hernial sac, fæcal matter escaped from the opening. In the centre of the old wound there was an opening about the size of a shilling, the edges of which projected and formed a kind of sphincter. It was ascertained that this opening led into one of the small intestines. The intestine was reduced, and fixed near the wound, and perfect rest was recommended to facilitate the union of the parts. The stools passed in the natural way at first, but were soon suppressed, and the wound of the integuments contracted, so that an artificial anus was established. (*Archives Générales.*)

PRACTICAL MEDICINE.

Case of spontaneous Ecchymosis, with acute Subcutaneous Œdema.—A female child, three years old, of a good constitution, and who had always enjoyed a perfect state of health, complained, immediately after taking a hearty meal, that she was incapable of standing. The legs were painful up to the knee. The left ankle was considerably swollen, and was the seat of numerous ecchymosis of a purplish colour. During the night, the right leg and foot presented the same appearances. The little patient was much agitated, and did not rest a moment. The skin was dry and hot, the belly tender. Next day, the upper eyelids became œdematous; the back of the left hand also swelled, and ecchymoses appeared in this part similar to those upon the legs.

The succeeding day, Dr. Ollivier visited her for the first time. The face was swollen, the upper eyelids œdematous, and so much tumefied as to prevent the globe of the eye from being visible. The left eyelid was not so much swollen as the right, but it was ecchymosed, and the purplish red colour of the skin did not disappear on pressure, as is the case in an erysipelatous blush of the surface. The back of the hands and the lower part of the forearm were œdematous, and covered with numerous ecchymoses of a deep colour, varying in size from a small speck to an inch and a half in extent. The inferior extremities had nearly the same appearance. The spots of ecchymosis were in these parts somewhat larger, and some were of a greenish yellow colour, as is observed when ecchymosis occurs from external violence. The child did not appear to suffer from pressure of the limbs, and the pain she experienced when the above symptoms first developed themselves had entirely ceased. The body was entirely free from ecchymosis. The pulse was full and 120 in a minute. Mild aperients were given and laxative glysters were used, and the symptoms diminished in a few days. The tenderness of the belly still continued.

Again, however, the child suddenly complained of her feet being painful. They were very hot, much swollen, and very tender to the touch. Large patches of ecchymosis soon appeared about the ankles. Several glysters were given of decoction of poppy heads, and which relieved the pain in the abdomen. On the next day, the pain of the lower extremities was rather increased, and the spots of ecchymosis were more general. It was observed that the extravasation occurred almost instantaneously. The child was twice put into a warm bath, and the swelling of the legs and the appearance of ecchymosis were much diminished. The left hypochondrium was very tender to the touch.

A few days afterwards, the legs and thighs were covered with an eruption resembling the Urticaria Subcutanea of WILLAN, which remained but for a few hours, and was succeeded by fresh patches of ecchymosis. Four grains of calomel were given, which brought away some slimy evacuations with a little blood. The dose was repeated by the parents, with the same effect. The child had entirely lost its appetite, and, as it was now observed to have periodical attacks of fever, and the pain of the belly had ceased, four grains of the Sulphate of Quinine were given in a glyster. Fresh spots of ecchymosis appeared upon the extremities, and the child was restless and much agitated during the night. Upon consultation, it was determined to apply six leeches to the anus. The warm bath was repeated.

From this time the child gradually improved, although the œdematous swellings and ecchymoses of the skin still continued to appear occasionally. When it appeared to be in a state of convalescence, the symptoms twice returned with their original violence, without any apparent cause. By strict attention to diet, and the employment of laxative glysters, the little patient at length perfectly recovered.

At the commencement of this disease, there were no symptoms of intestinal irritation. The loss of appetite and constant pain in the belly, which soon came on, clearly show, however, that the digestive organs were deranged; and, from the simultaneous appearance of cutaneous symptoms with the abdominal irritation, it cannot be doubted that they arose from the intimate sympathy which is so well known to exist between the skin and the mucous membrane of the intestines. (*Archives Gén. de Médecine.*)

Treatment of Traumatic Tetanus.—The symptoms of this formidable disease in many cases do not appear until many days have elapsed after the infliction of the local injury. In such instances, Dr. Wendt recommends that calomel should be freely exhibited, so as to produce very abundant alvine evacuations. In this country purgatives have been often tried, but mercury has not been administered in the manner advised by Dr. W. In the first case he has adduced, the patient was attacked with tetanic symptoms fourteen days after a surgical operation. The jaw was completely locked; the body rigid. Two grains of calomel were given every two hours. The symptoms not being alleviated, six grains of jalap were added to each dose. The bowels were freely acted upon, and on the following day the extreme rigidity of the muscles was much diminished. The wound continued healing. The same doses of calomel were given, but at more distant periods. In four days the spasmodic symptoms had almost entirely subsided. A slight difficulty in opening the mouth alone remained, and this was relieved by friction. The salivary glands were not at all affected.

In another case, which also followed an operation, the patient was seized with tetanic symptoms after imprudently exposing herself to cold. Calomel was administered in the same manner, and in four days every alarming symptom had subsided.

Dr. Wendt has since seen many similar cases of trismus and tetanus, succeeding to local injury, and the alvine treatment, he states, has always been crowned with success. (*Journal Complementaire, &c.*)

Sulphate of Quinine.—M. Bland, physician to the hospital of Beaucaire, has observed, in some cases of intermittents, that the use of this remedy, when given to the amount of twenty-four grains a day, produced considerable deafness on the second or third day of its employment. This effect was particularly observed in weak and nervous patients, who had laboured under tertian ague. The difficulty of hearing ceased on the eighth or twelfth day. During the deafness, the patients complained of rather severe headache. M. Bland suggests the propriety of being very cautious in the use of this valuable remedy in large doses.

Fever.—Dr. Alison says, In all there have been 170 cases which I considered as Simple Fever, and among these only three deaths. All the three had delirium, and two of them had a certain degree of stupor: they differed only in degree from the next class of cases to be noticed, the degree of insensibility simply not being such as would have appeared dangerous, but for the sinking of the circulation, which was manifest long before death. In the only one of them in which dissection was permitted, no appearance was found that could be decidedly pronounced to be morbid. It may be observed, that under this head of simple fever a number of cases are included, in which there was apparently a threatening of dangerous complications at first, and which may probably have been reduced to the form of simple fever by the evacuations practised.

There have been in all seventy-nine cases in which the affections of the nervous system predominated, and evidently constituted a great part of the danger; and among these seventy-nine there were twenty-one deaths. But I have already stated, that even where the affections of the nervous system existed in a degree that seemed quite sufficient of itself to indicate danger, it very often happened that they were combined with such feebleness of pulse, and other marks of failure of the circulation, that death might be said to take place as much in the way of asthenia as of coma. In most of these cases the comatose tendency, with spasm and subsultus and the failure of the circulation, come on simultaneously and gradually; but in some there was a state of restless active delirium, with animation of the countenance, liveliness of the eyes, and contraction of the pupils, after the voice had become faint, the extremities cold, and the pulse very feeble, or almost imperceptible, constituting the condition which is described by Mr. Travers as "prostration with excitement," and which suggested the remark of Andral, that there is "dans plusieurs cas de fièvres graves, une excitation factice, aussi bien qu'une fausse prostration." This state generally subsided rapidly into absolute and speedily fatal insensibility. Of the twenty-one fatal cases, I considered only five to be examples of death strictly in the way of coma. The duration of the fatal cases under this head was from nine to twenty days, but seldom above fifteen.

We had dissections of fifteen of the twenty-one fatal cases under this head. The only appearance found in any of them which I could regard as morbid was effusion of serum, chiefly beneath the arachnoid and in the ventricles. In judging whether the quantity of serum found in these situations was to be accounted certainly morbid, I have taken as a guide the observation of Andral, that, in order to be so, the effusion should be "assez considerable *pour soulever notablement l'arachnoide, ou distendre les ventricules*;" but so far from finding, as he has done, such amount of effusion very rare, it has appeared to me the most frequent of all the morbid appearances observable in fever. In twelve at least of these fifteen cases, it seemed to me obvious that the arachnoid was partially elevated, and the ventricles distended beyond their usual dimensions. But the quantity of effusion was never great. What was found in the ventricles never exceeded half an ounce, and did not exceed two drachms in more than three cases. Farther, the quantity of this effusion bore no proportion to the degree of affection of the nervous system before death. In some who had these symptoms violently, it was well marked; but in a boy who died decidedly comatose, (his pulse being full almost to the moment of death,) it was very slight, not exceeding a drachm in the ventricles, and being hardly perceptible beneath the arachnoid. In a woman who had, among other nervous symptoms, repeated and general convulsions, it was equally inconsiderable; and in the case already mentioned of a young man who was jaundiced, and died quite comatose, with dilated pupil and stertorous breathing, the quantity found in the ventricles hardly exceeded half a drachm, and there was positively none beneath the arachnoid. Such an amount of effusion as is found in the heads of many fever patients may be regarded, I think, as a sign that an increased action of vessels has taken place there; but by no means as a proof that such increased vascular action has been the cause of all the nervous symptoms.

In the treatment of this form of fever, when seen from the commencement, I have no doubt that blood-letting is almost always a proper preliminary to all other measures; but after the pain of head has subsided, although the pulse be of good strength, its beneficial effects are less decided. The use of cold applications, especially to the head, and fomentations of the legs, and the pediluvium, are generally and justly esteemed. In some cases of active delirium, with pretty firm pulse, nauseating and purging doses of tartar emetic have appeared a very useful auxiliary. When the chief nervous symptoms are the comatose tendency and spasms, blistering the head and neck, and continued though not violent purging, appear to be the most suitable evacuations, and I have seen many striking instances of their efficacy. It may be worth while to state, in regard to purgatives, that they would appear to be useful chiefly on the simple principle of derivation, and the appearance of the stools can by no means be taken as a guide either to their use or discontinuance. I have many times used them for days together with what appeared to me manifest good effect on the nervous symptoms, although nothing in the slightest degree morbid could be detected in the evacuations; and, on the other hand, when the most urgent symptoms have been those of mere debility, I have withheld purgatives, although the stools were very dark-coloured and offensive, and have had the satisfaction of seeing the natural appearance restored, as the general febrile symptoms improved, without the use of any means specially directed to this end. The pulse, notwithstanding the fallacies so often attributed to it, has appeared to me a much surer indication of such strength of the circulating system as demands evacuation, than the heat of the skin. I have seen the heat, in various cases, as high as 103 and 104, when the pulse was soft and feeble, and the disease advanced, and when gentle stimulants appeared to me to be required, and were used with success.

When the nervous symptoms in the advanced stages of fever have been accompanied with manifest weakness of pulse, I have used wine in small but often gradually increasing doses, and camphor or ammonia, along with the evacuations now mentioned, or even, where the depression has been very great, without them; and have thought them much more frequently and decidedly useful in the present epidemic than formerly. In reflecting on some of the fatal cases, I have thought that these remedies had been too soon given, and in others that they had been too long delayed; and I have no doubt, from watching the progress of many such cases, that errors may very easily be committed in both ways, even by persons conversant with the disease. The greatest difficulty has appeared to me to be in judging of the probable effects either of evacuations, or stimulants, or anodynes, in persons habituated to strong liquors, and whose symptoms in fever resemble those of delirium tremens.

Opiates have appeared of most essential service in some cases where there was much slighter delirium and restlessness, without pain of head or flushing, therefore generally after loss of blood. I have used them repeatedly in such circumstances so early as the fourth or fifth day, with this marked good effect, that sleep has followed their use; and, after one or two repetitions of the dose, the patient has passed into the state of drowsiness without stupor, which is known to be one of the most favorable forms of simple fever, and has had no farther occasion either for anodynes or other active remedies. The more violent tremors and subsultus of the advanced stage of fever have generally been combined with so much stupor as appeared to render the full use of opiates hazardous, and, where they have been tried under such circumstances, they have not appeared to me successful.

Of fifty-eight cases in which the function of respiration was embarrassed at one period or other of the disease, in a degree which appeared to indicate danger, thirteen were fatal; but of these, four only were fatal strictly in the way of asphyxia: in the other nine there was extreme debility, but no such urgent dyspnœa towards the close of life, as appeared from comparison with other cases, in which the pulse continued firmer, to be incompatible with the restoration of health. Indeed, in several of these last the breathing had become so easy many hours, or even days, before death, that the amount of disorganization of the lungs found after death excited much surprise. The duration of the fatal cases under this head was from twelve to twenty days. The cases of those who recovered from this complication were generally very protracted, in several instances lasting five, or even six, weeks before the fever subsided; after which, however, the recovery appeared to be complete.

Very few of the cases under this head showed any symptoms of pleurisy, and none who died during the continuance of the fever had the pleura inflamed. In two cases (a child three years old and a young man,) the affection of the breathing, which came on late in the disease, and when the strength was much exhausted, was decidedly croupy; and in both, on dissection, inflammatory thickening and tenacious muco-purulent effusion were found on the mucous membrane of the larynx, though not in such a degree as nearly to close the glottis. In general the affection of the chest appeared to be chiefly bronchitis, and this was sometimes evidently very general; but there was often great difficulty in forming a judgment whether or not the substance of the lungs was undergoing inflammation and disorganization, and how far evacuations ought to be carried in the hope of checking these processes; and this difficulty was by no means wholly removed even by examination after death. Dissection was obtained in two only of the four cases in which I have stated that death took place strictly in the way of asphyxia, and in neither of these was there any part of the lungs found so far condensed as not to crepitate when cut. In both the bronchi were much clogged with frothy mucus. In one this was the only appearance decidedly morbid. This was in a young man of slender make, admitted on the tenth day of the disease, and in a state of great debility: he was twice leeched on the breast, but not bled. In the other the lungs were very generally œdematous, and in several places even the superior portions were of a red colour. This was in a very strong young man, whose pulse was full throughout the disease, and who was largely and repeatedly bled both before and after admission, though not for a week before death.

In four of the cases which were considered as fever with affection of the chest, but in which the impeded state of the breathing did not appear to be the chief cause of death, we found, on dissection, pretty large portions of both lungs so far condensed as not to crepitate when cut, and smaller portions so heavy as to sink in water. In all these the condensation was chiefly in the posterior portions; and, consequently, the patients having all lain on their backs in a state of extreme debility for some days before death, it was difficult to say how much of the condensation was to be considered as the "peripneumonie des agonisans,"—that is, was to be ascribed to the congestion of blood in the depending parts of the lungs, during the time preceding death, when the strength of the heart may be supposed insufficient to counteract the effect of gravitation on the blood. But, although I have no doubt that part of the appearance was to be ascribed to this cause, and although a degree of the change alluded to may certainly be often seen in the posterior portions of the lungs when there has been no ground for suspicion of disease there, yet as the condensation was in each case somewhat greater in one lung than the other, and as it projected forwards towards the anterior surface of the lungs in some places more than in others, we concluded that the appearance might be regarded as indicating inflammation. I must add, however, that two of these patients (treated in Queensberry House) were seen almost from the beginning of their illness, and were bled repeatedly, and to as great an extent as the state of the general symptoms seemed to permit; and I am confident that no one, who saw the progress of the symptoms after the last bleeding in these two cases, would have thought us justified in the farther use of the remedy.

Besides early bleeding, leeching, and blistering, the remedies that have seemed to me most useful in cases of this complication have been small doses of tartar emetic, and of ipecacuanha and calomel, with opiates. Many of them have appeared to me to require an allowance of wine when they became protracted, and have improved under it.

The abdominal affection chiefly observed has been diarrhœa, with pain of abdomen; sometimes with tenderness; often with the florid red tongue; sometimes with bloody stools. Sometimes, however, pain of abdomen and vomiting have been the abdominal symptoms observed; and this was the case in the only one of these cases which proved fatal,—namely, in an old man, who had a very weak pulse and cool skin almost from the first. He had vomiting of matter like coffee-grounds, and died on the eighth day. The only decidedly morbid appearance found in him on dissection was enlargement and induration of the liver. The cases of diarrhœa with pain and tenderness were treated chiefly by small bleedings, general and local,—by fomentations and opiates, in such quantity as to moderate without abruptly checking the evacuations,—and by mild laxatives occasionally interposed when the stools were slimy and scanty. Some of these cases were very protracted.

In regard to the tendency to diarrhœa in fever, there appears to be a marked difference (perhaps not sufficiently known) between the inhabitants of France and of this country. It is stated by Andral, (Clin. Med. t. i. p. 12 and 14,) that there are few cases of fever in the hospitals of Paris in which a spontaneous diarrhœa does not occur, and that the greater number of these patients have from five to ten stools daily. I need not say that the opposite state of the bowels is most general in this country during fever, at least in adults. In children, painful diarrhœa is common; and the greater number of the cases under this head in the hospitals were below the age of fifteen. (*Edinburgh Med. and Surg. Journal.*)

MEDICAL JURISPRUDENCE.

On the Signs of Drowning.—M. ORFILA lately read a Memoir on this subject to the Royal Academy of Medicine in Paris. The object is to establish certain criteria by which we may ascertain whether the submersion has taken place before or after death; and this he has attempted to do by numerous examinations of the bodies of individuals who have drowned themselves, and by experiments on dogs. The inferences which he draws are almost all of a negative kind, and, as they contain an epitome of all that is known on the subject, we subjoin them.

1. That the red, livid, and swelled condition of the face, with froth at the mouth and nostrils, which some authors have laid down as indicating that the submersion has taken place during life, leads to no such inference, as it is wanting in many who have been drowned, and is present in many who have met their death by other means.

2. That the same remarks apply to extreme paleness of the face, which is an effect of the body remaining long in the water. M. Orfila here describes

the alterations which the skin undergoes in those who have been long submersed. He asserts that on the legs the integuments become indigo colour, and then brownish on exposure to the air, while the rest of the body is very white; but the moment it comes into contact with the air, it is successively converted into brown and green, commencing at the chest. Remaining long in the water also brings on abrasions of the skin, which may give rise to the idea of wounds having been inflicted.

3. Excoriations of the fingers and traces of dirt under the nails are of no assistance, because they are wanting in those who are drowned before they come to the bottom, while they may be present in a body which, being thrown into a river, strikes against various obstacles.

4. Injections of the brain and its membranes M. Orfila thinks would be a satisfactory indication of drowning, if it were proved that the body became cold in a vertical position. As, however, this sign is frequently absent in those who have been drowned, so it cannot be regarded as a positive proof.

5. In those who have been drowned, the right cavities of the heart, the venæ cavæ, the pulmonary veins and arteries, are generally distended by a quantity of black blood, while the left side of the heart and the aorta are much less filled; the right ventricle is of a blackish brown; the left of a clear rose colour; and the right cavities retain a less contractile power than the left. This condition, however, is met with in many cases of sudden death.

6. Although the blood is generally fluid, yet M. Orfila has seen it coagulated in one individual who was drowned; a fact also observed by Lafosse, and more recently by M. Avissard.

7. The dissection of more than fifty persons who had been drowned has satisfied M. Orfila that it is a mistake to suppose that in drowning the individuals die during inspiration, and that, in consequence, they have the diaphragm pushed into the abdomen, and the chest elevated.

8. He regards the colour of the abdominal viscera as indicative of asphyxia in general, but not from drowning in particular.

9. The experiments of Edwards, Jenner, Cox, and Orfila, show that water enters the stomachs of those who drown themselves; while this is not the case with regard to bodies thrown into the water. But, in order to give its full value to this sign, it would require to be proved that the water had neither been swallowed before death nor injected after it.

10. It is not true that the epiglottis is pushed down upon the larynx.

11. Great importance had been attributed to the presence of sanguineous froth in the windpipe. M. Orfila objects, however, that this exists in other cases, as in death from epilepsy and hanging; while it is wanting in the drowned who have remained long under water, without coming to the surface to breathe.

M. Orfila made a considerable number of experiments to ascertain if water enters into the ramifications of the bronchi of the drowned; and he has always found that the fluid entered the lungs of the animal, and that the quantity was greater or less in proportion to the care took to keep the head erect in lifting the animal out of the water. But the fluid is not found in the air-passages, if the examination be made soon after death. As to the question whether the water enters the lungs after death, the experiments of M. Orfila agree with those of M. Piorry, proving that it does enter, and more completely the more vertical the position of the animal; and consequently the presence of water is no ta sufficient proof of drowning, as water enters the air-passages of the dead body, and that the only absolute sign is the presence of water in the minute ramifications of the bronchi; it being proved that this water is the same as that in which the individual was immersed, that it had been injected after death, and could not have penetrated to the lungs from the vertical position of the body in the liquid.

SURGERY.

EXTRAORDINARY OPERATIONS.

Aneurism: Application of a Ligature beyond the Tumor.—In a recent Number of the American Medical Recorder, we find the following passage:—"We may be permitted to state our belief that persons have been committed to the grave because improper surgical measures (surgical operations) were enforced, in cases where ignorance alone was not a sufficient plea, but where daring arrogance, unfeeling boldness, and a longing after fame, have hurried on to the commission of acts which would sully the bright escutcheon of any one guilty of violating that sacred charge—'Thou shalt not kill.'"

From this extract it would appear that our transatlantic brethren are not behind in the practice of what, among us, has received the gentler appellation of "bold surgery; and, although we would neither encourage timidity, on the one hand, nor, on the other, apply such strong language to any thing that has been done among us, yet we look upon a passion for performing extraordinory feats in surgery as one of the characteristics of the present day. We, therefore, purpose examining some of those operations which have of late been proposed, with a view of fairly ascertaining the grounds on which they lay claim to our confidence; and we are the more impressed with the necessity of making this scrutiny, from observing that the usual mode of reasoning on such subjects has, in some recent discussions, been lost sight of, or altogether abandoned. Formerly, the cure of the disease, and the recovery of the patient, were looked upon as somewhat in favor of the treatment adopted; and, on the contrary, a fatal issue was thought rather to militate against the efficiency of the means employed. Indeed, it was reserved for the last few years to bring to light examples at variance with these old-fashioned notions; and it would now appear so little requisite that there should be any connexion between the remedy and the complaint, that operations are represented as having cured diseases which dissection has proved never to have existed: while so little has recovery to do with success, that in one instance the cure was published when the patient was in her coffin.

Events of this nature are calculated to mislead the profession, to retard the progress of science, and to bring discredit on our art: we shall therefore, in the present and some future Number, discuss the subject on the principle stated in our Address,—that, when men likely to have influence were "disseminating opinions or acting on principles practically injurious, we should do all in our power to obviate such an evil."

The first of these operations to which we shall advert, and probably the only one which our limits will permit us to discuss in the present Number, is that of tying the artery beyond the tumor in certain cases of aneurism. This method has been revived by Mr. Wardrop, after it had failed in the hands of one of the most eminent surgeons in Europe, (Sir Astley Cooper;) a circumstance which ought to have led to considerable caution in any attempt to bring it forward again. We think this remark will be justified by the examination, which we subjoin, of those cases in which it has recently been performed by Mr. Wardrop.

The case in which Mr. Wardrop originally performed the proposed operation, is detailed by him in the 13th volume, part 1, of the Medico-Chirurgical Transactions, and in the following words:—

"A lady, seventy-five years of age, after a very violent fit of coughing, perceived a swelling on the right side of her neck, a little above the clavicle. When I saw her eight days afterwards, the tumor had all the characters of an aneurism of the carotid artery, and had become as large as a fist, but was so situated that it was quite impracticable to tie the vessel below the tumor, so closely did it come in contact with the clavicle. The tumor continued to increase in size; and, *on the eleventh day after it was first observed, it had acquired a formidable aspect, the scapular portion having become very red and painful,* the pulsation, which was very strong throughout the whole swelling, being here particularly so, and the parietes *feeling extremely thin, and as if ready to burst.*" After the operation, the size of the tumor, and the strength of the pulsations, gradually diminished. "The redness of the skin, however, continued to increase; and that of the scapular portion of the tumor to become more and more of a purple colour, till at last ulceration commenced on the most prominent part. Several considerable sized portions of coagulated blood were discharged, *along with some healthy pus,* through the ulcerated opening; and, on the twentieth day after the operation, the ulceration of the integuments had closed, and nothing of the tumor remained but some wrinkling of the skin, and a considerable degree of thickening of those parts on which the base of the tumor had rested."

Now, we ask, who ever heard of an aneurism which, at the end of eleven days from its commencement, had advanced so far as to be inflamed and ready to burst? Who ever heard of an aneurism which, within three weeks more, did actually ulcerate and discharge healthy pus, mixed with some coagula of blood? It is impossible, we think, for any practical surgeon to read this case, and to look at the drawing given of it by Mr. Wardrop, without perceiving that the whole history is at variance with the obscure origin,—the gradual development, and protracted course of aneurism. We believe that the nature of the disease in this instance was altogether mistaken. And, at all events, giving to the case the most favorable construction of which it is susceptible, we hesitate not to say that it is so different from other cases of aneurism, as to lead to no rational inference with regard to the effect of similar treatment in that disease.

The next case is that of Mrs. D., who laboured under aneurism of the arteria innominata, for which Mr. Wardrop tied the subclavian artery: and the point to be ascertained here is, not whether there was really an aneurism, as in the preceding case, nor whether the vessel was bonâ fidê tied, as in that which is to come: but the question is simply this,—what is the present condition of the patient?

Dr. Barry, in some observations which he lately made in public, adverted to this case, stating that he had seen and minutely examined the subject of this operation, and that the result of the examination had satisfied him that she laboured under organic disease within the chest, which gave rise to a distressing difficulty of respiration, and placed her in a very precarious condition. This statement was made, not only without any expression of disapprobation towards Mr. Wardrop, but in the most fair and handsome manner. There is something, however, intoxicating in flattery, and those who long have been "dieted on praises sauced with lies" cannot relish wholesome food. Mr. Wardrop was induced to write to the editor of the "invaluable" Journal a letter, which places on record his account of the state of Mrs. D. at a particular period, to which account he thus stands pledged. He informs us, under date December 5th, that Dr. Barry had given "a very imperfect statement," and that he was anxious to prevent the public from being misled by it. He then proceeds to inform us, that his patient was in the enjoyment of "good, though feeble health," and that "a perfect cure had been effected." Now, in judging between the opposing statements of these gentlemen, it is of importance to be aware that Dr. Barry had been frequently with the patient, and founded his opinion upon actual examination. Whereas Mr. Wardrop, at the time he wrote his account, had, as we are informed upon unquestionable authority, not seen Mrs. D. for several weeks. And we assert that, so far from her enjoying "good, though perfect health," and *à fortiori*, so far from a "perfect cure having been effected," she is at this moment labouring under thoracic disease, which, if not accelerated, has at least been in no degree retarded by the operation, and that she is now in apparently desperate circumstances.*

Dr. Barry, in a letter, the delicacy of which towards Mr. Wardrop forms a striking contrast to the treatment he had himself experienced, well remarks, that "it is of the last importance to the profession, and to humanity, that the principles and the application of this bold and novel practice should be maturely and carefully weighed. That this hazardous operation should be viewed in all its bearings by other eyes than those of the man whose zeal for the improvement of chirurgic medicine first led him to perform it, but whose cooler judgment may for a moment have been dazzled by the brilliancy of the anticipated results."

Of Mr. Wardrop's remaining case, little need be said. It was supposed to be an aneurism of the carotid artery, and Mr. Wardrop was supposed to have tied that vessel; but, as both these suppositions proved to be erroneous, the operation, in whatever it may have consisted, can have no influence on the present question.

There is yet one other case to which we have to allude: it is that which fell under the care of Mr. Lambert. This was a very small dilatation of the carotid near its origin; and we are informed by the author himself "that Sir Astley Cooper discountenanced the operation, and remarked that it was an aneurism by dilatation, which would not increase." Mr. Key, Mr. B. Cooper, and Mr. Callaway, severally gave opinions against the operation. Mr. Lambert, however, acknowledges that he "was not at all satisfied," and consulted his "friend Mr. Wakley," who "recommended the operation to be immediately performed;" and, lastly, Mr. Wardrop "unreservedly declared himself" of the same opinion. Mr. Lambert, backed by these authorities, proceeded to the operation; and thus afforded the first practical illustration of the evil which has resulted from the view given of these cases, and the premature conclusions which have been drawn from them. The patient died, in consequence of the artery ulcerating at the point where the ligature had been applied. This case, however, unfortunate as was the result, and imperfect as is the evidence it affords, yet goes farther to establish the principle than any of Mr. Wardrop's; because dissection showed that a restorative process had begun, and thin layers of lymph were discerned on the inner surface of the dilated part of the vessel.

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* The aneurism is now increasing externally, so that the patient is much in the same state as before the operation.

Mr. Wardrop, in the letter alluded to, says he has reason to believe "that not only the principle is now universally admitted, but that in future the operation will, without hesitation, be adopted." With all deference to Mr. Wardrop, we think that, after the examination of his cases which we have just made, surgeons will hesitate very considerably; and, before they either admit the principle or follow the practice, they will require some evidence less equivocal than that of four operations, in one of which the carotid artery appears to have been tied indeed, but where we hold that there was no aneurism; in the second of which, dissection showed that there was neither aneurism, nor had been ligature of the vessel; in the third of which, we have speedy death; and in the fourth of which, the physician in attendance (a friend of the operator) declares that he has "strong motives for reserve" as to the "perfect propriety and complete success of this operation." Had the account of this last rested on our authority alone, it might, and no doubt would, have been met by denial; but as it is, Mr. Wardrop can only exclaim, in the words of the Spanish proverb, "God defend me from my friends, and I will defend myself from my enemies." Assuredly no one had ever more cause to make use of the exclamation.

[The operation has likewise been performed by Sir E. Home; who, induced by the alleged success of Mr. Wardrop's first case, tied the inguinal artery in an aneurism of the external iliac, at Chelsea College, but without any effect whatever in arresting the progress of the disease.]

* * *

Extirpation of Ovarian Tumors.—There is a curious contrast between the medical and surgical practice of our continental brethren,—the former employing such remedies as marsh-mallow ptisans and orange-flower water, and exclaiming against the practice of England as fit only for horses: the latter ventures on operations so daring, that most English surgeons shrink from performing them. Of late years, however, some of the operators of this island have shown an anxiety to import such operations from the continent, or to invent others which vie with them in boldness. Mr. Lizars, of Edinburgh, published four cases, in which long incisions had been made into the abdomen, from which the bowels protruded, for the removal of tumors of the ovary. Of the four patients who were the subjects of this operation, one died, (we do not like to use a stronger expression;) in another, when the abdomen was laid open, no tumor was found; in the third, the tumor adhered so extensively that it could not be removed; in the fourth, one tumor was removed, but another, almost as large, was left behind. One would suppose that these results would have been sufficiently discouraging, yet Mr. Lizars takes for his motto this sentence: "If English surgeons will not perform these operations, those of France and America will." Although Mr. Lizars has formed an estimate of these cases exactly the opposite to that of ninety-nine men out of a hundred, he deserves great credit for the candour of his publication.

We understand, on authority which we cannot doubt, that, within the last month or two, a practitioner of note in this town has extirpated the uterus of a poor woman from the country. What the result was, we know only from report, but we think, in honesty to his brethren, he is bound to publish it.

Whether successful or not, it will be a useful guide to those who are deliberating about the propriety of performing this operation. Nothing can be more mischievous than to publish only fortunate cases, except it be to permit failures to circulate as successes. A few months ago a paragraph appeared in the Literary Gazette, headed "Extraordinary Surgical Operation," stating that a tumor, eight pounds in weight, and larger than a man's head, had been extracted through an incision nine inches long, from the abdomen of a woman, with great facility, and with the loss of not more than two ounces of blood. Since then it has been copied into the New Monthly Magazine. What will our readers think when we tell them that the poor woman died a few days after the operation; yet this important appendix to the case has never been added to it, and it has circulated as a successful operation among the numerous readers of the Literary Gazette and the Monthly Magazine; many of them, of course, medical men, and some of them young surgeons, longing to flesh their knives with some such surgical enterprise.

Method of bringing on Premature Labour, and preventing future Pregnancy. —The next operation to which we would call the attention of our profession, is one which Dr. Blundell, the lecturer on midwifery at Guy's Hospital, is represented as recommending to his class. It is——but our readers will not believe it unless we give his own words, which we shall do as they are reported in the Lancet. Speaking of those cases in which the pelvis is so narrow that at the full time it is impossible to extract the child, excepting by the Cæsarian operation, the Doctor says—"Suppose a woman has a high contraction, (an excessively contracted pelvis?) and is in the early months of gestation; I will suppose that she may not have gone above one or two months: now in this case, of course, it would, if practicable, be desirable to introduce an instrument into the uterine cavity, so as to discharge the liquor amnii, and in that way bring on premature delivery; but very probably you might not be able to enter the uterus: *nay, you might not be dextrous* or fortunate *enough even to feel the os uteri.* Under these circumstances, another operation, and an operation which *I would strongly recommend* to your attention, might be attempted. Make an opening a little above the symphysis pubis, in or near the linea alba, carefully avoiding the bladder: at this opening introduce one of your fingers, say the forefinger of your left hand, so as to get a bearing (?) on the uterus. This accomplished, take some slender-pointed instrument and pretty stiff, and, by a sort of acupuncture, carry this instrument through the body of the uterus into its cavity, and, on entering the uterine cavity, move the wire cautiously, yet effectually, in different directions, so as to break the ovum all to pieces, and put an effectual stop to the generative process. The ovum destroyed, draw up the fallopian tube, which is easily done, first on the one side, and then on the other, cutting out a portion of it so as to render it impervious, by which the woman would for ever afterwards become sterile. By this operation, successfully performed, you would at once secure the woman against the Cæsarian incision, and preclude the risk of her ever being pregnant again. In performing the operation, I should be very careful to break up the ovum thoroughly, even if I laboured fifteen or twenty minutes."

Thus, unless the reporter has made some mistake in his account of the lecture, which we sometimes suspect, an operation is recommended to an ordinary practitioner of midwifery, which few hospital surgeons would venture to perform,—namely, to make an incision into the abdomen; to thrust a pointed instrument through the uterus into its cavity; to move it about, and thereby destroy the texture and life of the ovum; to draw out the fallopian tube and cut off a portion of it, and then serve the other in the same way;—and this operation is put into the hands of a man who is supposed to be such a bungler as not to find the natural orifice of the uterus! Making full allowance for the difficulty of feeling the os uteri in the first month or two of pregnancy, and supposing this difficulty to be increased by the excessive deformity of the pelvis, surely it would be better to take a lesson from our continental brethren, and dilate the vagina by a tin speculum, and light it up by a candle to help us in our search. Any plan to avoid such—let us use the doctor's own words—such "a ferocious, atrocious" operation.

We close this article with the account of an operation, of which the hardest thing that can be said is, that it is rather whimsical. Dr. Arnott, in his late work, entitled the Elements of Physics, proposes as a substitute for the midwifery forceps an instrument like a schoolboy's sucker, which he denominates his Pneumatic Tractor. It consists of a circular piece of leather, three inches in diameter, and kept extended by a ring, with a cord fixed firmly to the centre: this is to be wetted, and applied to the presenting part of the child's head, just as the schoolboy would apply his sucker to a flat stone; by extending the cord, and thereby raising the centre of the leather from the head in the one case, or the stone in the other, a vacuum is formed between the leather and the head, or stone, and the surrounding edge grasps it firmly like that of a cupping glass. "This (says Dr. Arnott,) would act upon any body, to lift or draw it, with a force of about a hundred pounds, and with much more, therefore, than is ever required or allowable in obstetric practice."

The most ungentle criticism which we have to direct against the proposal of this agreeable writer, is a smile: but how easy would it be to put this proposal to the test of experiment, when perhaps the laugh would be turned against ourselves. We heartily wish it might; for certainly the midwifery forceps are safe and useful only in the hands of those few who employ them often enough to acquire dexterity in their application. Be it remembered that the forceps have two powers of essential importance in the cases for which they are used: the one that of slightly compressing the head, the other that of turning it from an unfavorable position. Neither of these are possessed by the Doctor's tractor, which we think much more likely to tear off the scalp than to pull out the head. (*Medical Gazette.*)

Spina Bifida cured by Puncture.—A child was taken to Professor Ruggieri, with paralysis of the inferior extremities. Upon examination, it was found that spina bifida existed upon the lumbar vertebræ. The tumor was transparent, and painful upon pressure. There was an obvious fluctuation in it. The mother was desired to protect it from injury as much as possible, and no curative means were attempted. The child was shortly afterwards entrusted, perfectly naked, to the care of its sister for a few moments, and by some accident the tumor was punctured. A large quantity of fluid escaped, and the child suffered no inconvenience. It was taken almost immediately to M. Bozeki, who found the tumor flaccid and wrinkled. Slight pressure was applied by means of a bandage; but in a few days the tumor again enlarged, although it did not regain its original size. It was now punctured with a needle, and its contents evacuated. Slight inflammation arose on the following day in the tumor, and adhesion took place between the skin and surrounding parts. A small quantity of fluid again collected, which was removed in a similar manner. Compression was again applied, and the surrounding parts became completely consolidated. In the course of a year, the vertebral column had acquired a semi-cartilaginous hardness, and the paralytic affection of the inferior extremities was entirely removed. A thin sheet of lead was kept upon the part by means of a bandage.

Another child was treated in the same manner, and with similar success.

The relator of these cases observes, that so fortunate a result must not be expected when spina bifida is complicated with hydrocephalus. *(Annali Universali di Med.)*

Treatment of Nævi by Ligature.—Mr. Lawrence, after enumerating several cases successfully treated by ligature, makes the following remarks:—

The superior safety of the ligature, in reference to the danger of hemorrhage, is rendered obvious by these cases. In the first I would not have performed excision, feeling satisfied that immediate death from bleeding would have been inevitable. There would have been less risk in leaving the case to nature. But, supposing this danger to have been surmounted, the patient would have been in a much more dangerous state with the great wound of excision, than with the comparatively small breach of surface caused by the ligature. It would have been necessary to make an elliptical incision, with each side at least four inches long. The ligature is applied close to the base of the tumor, while it would be necessary, in order to clear the diseased part, to keep half an inch from it with the knife. This is an important advantage on the side of the ligature in the numerous instances where extensive loss of skin would cause deformity.

The knife might have been safely used in the second case; but the operation would have been serious, and the loss of blood considerable; while with the ligature the latter was entirely avoided, and no symptom of the smallest consequence occurred.

The treatment by excision in the third case would have involved the necessity of a very large wound, and the risk of fatal hemorrhage. The latter danger would have equally attended the same practice in the fourth instance: a large wound would have been required, running very near to the edge of the lower eyelid, with a great probability of eversion on the contraction of the cicatrix.

Our object, in this mode of treatment, is to intercept the circulation completely in the tied part, and thus to deprive it of vitality as speedily as possible. The ligatures must be drawn very tightly, and ought therefore to be so strong as to bear the utmost force we can employ with the fingers and thumbs without breaking. Stout silk twist will answer the purpose; but we should observe the precaution of trying its strength previously. As it is necessary, in some instances, to include a large bulk of parts, their complete strangulation is not easily effected, however strong the ligature may be. Perhaps it might be advisable, under such circumstances, to adopt the proceeding recommended by Mr. Mayor, of Lausanne.

As the continued pressure of the ligatures keeps up irritation in the parts immediately constricted, and in those around, which are forcibly dragged together and puckered, it is desirable to remove them as soon as we can be certain that the objects of their application are accomplished,—namely, coagulation of the blood in the vessels composing the tumor, and death of the part. The foregoing cases prove that these purposes are fully effected in forty-eight hours, while the fourth shows that we cannot safely trust to a compression of one half that duration. The danger of inflammation or irritation is at an end as soon as the ligature is taken away, and the relief to the patient from its removal is very obvious.

Mr. **Anthony White**, on the same subject, says,—

It has been my practice during many years to destroy the larger specimens of nævi by strangulation with the ligature: a curved needle is passed under their base, and a single or double ligature used, according to the magnitude, figure, and situation of the tumor; and I recollect one example, in the destruction of which it was necessary to pass four ligatures in order to entangle the whole of the spurious structure, on account of its irregular form and diffused surface, situate behind the ear and extending down the neck of a very young infant. An assistant should raise the tumor with as much of surrounding skin in which it grows as possible, and thus enable the operator to pass the needle sufficiently deep, and at the same time include with his knot a portion of the healthy integument.

When the nævus is not large, a needle of sufficient length being carried under the centre of its base and the structure elevated upon it, a single ligature passed behind the needle, and firmly tied with a double noose, will be sufficient to destroy the organization. Where, however, the size of the tumor renders its strangulation by this mode doubtful, the needle should be armed with a double ligature, to enable the operator to tie one half with each. This, in every instance where the whole substance has been included, has uniformly destroyed the structure, leaving, on its separation, a healthy granulating surface. There are some instances, however, and some situations, where it is impossible to include the whole of the tumor with the ligature; but generally, in such cases, the inflammation excited by its application in the neighbouring parts is sufficient to obliterate, by condensation of the surrounding cellular structure, any remaining portion of the nævus.

I have met with but one instance of a partial recurrence of the disease, but which I had anticipated. The history of the case is detailed hereafter. (*Medico-Chirurgical Transactions.*)

Fungous Eruption.—Mr. **Wallace** gives the following account of a disease of this nature curable by mercury, but not of venereal origin.

Martin Lavin, aged forty years, of a tall and slender figure, with a pallid countenance, a poor man, earning a livelihood by a traffic in old clothes, broken glass, &c. applied at the Skin Infirmary, on the 16th of October, 1819, to obtain relief for a disease, of which the following is a description.

A number of tumors, some about the diameter and elevation of a filbert, others as large as a small walnut. On an accurate examination, they were observed to be crusted, or covered with a yellow brown scab, and to be surrounded, to the extent of about two lines, by an areola of livid-coloured skin, which was rough, in consequence of desquamation of its cuticle. On removing the scab or crust, it was found to form a covering or cap to a fungus or excrescence, of a pale or dirty pink colour, having but little sensibility when handled, and exactly resembling in figure a small mulberry or raspberry. There were also, on many parts of the surface of the skin, marks or stains of a rounded form and livid colour, of the same diameter in general as the fungi, scarcely elevated above the surrounding skin, wrinkled, and in some situations with the cuticle covering their surface in a state of furfuration.

Each of the existing fungi, and several others which he says have been cured, commenced (according to his description) in an itchy pimple, which gradually increased without much soreness or itching; and having existed for some time, many imperceptibly shrunk away, leaving behind them the livid marks above mentioned. Nevertheless, it does not appear that they spontaneously subsided, but in consequence of unguents which he applied to them.

The fungi at present in existence are five in number, and are seated one in each of the following situations,—viz. in the nape of the neck, close to the hairy scalp; on the left of the anterior part of the abdomen, a little above the umbilicus; on the anterior fold of the right axilla; on the corresponding arm, immediately above the internal condyle of the humerus; and on the upper and outer part of the right thigh.

There is no pain in any of his joints or bones,—no soreness of his throat,—no perceptible derangement of his general health.

He attributes the origin of these fungi, which he says commenced in last April, (six months previously to his application at the Skin Infirmary,) to lying in dirty beds. Has a wife, with whom he cohabits, and has not communicated the disease to her. He never saw any person labour under a similar disease. Denies having ever had gonorrhœa or chancre. Has not had his health deranged in any way, either immediately before the appearance of the fungi, or at any time since.

* * * *

One of the most remarkable circumstances connected with the growth of these fungi, is the power which the part upon which they are seated possesses of healing, without the formation of any permanent cicatrix: demonstrating that these fungi grow from the *surface* of the cutis, and that the texture of this covering is not permanently injured. Indeed, if the fungus be healed before the process of ulceration has commenced, no mark whatever, except a temporary redness, with a disposition to furfurate, remains; but, if ulceration has taken place, a permanent cicatrix is necessarily produced. I have, however, on many occasions remarked a fungus to heal without either ulceration or a permanent cicatrix, after it had arrived at the magnitude of a walnut. While observing the progress of cicatrisation, I have remarked that, although it generally advanced from the circumference towards the centre, sometimes this was not the case. The large fungus, which was seated on the thigh of Walsh, (Case II.) and which was at first without any crust, in the course of a few days became covered by two scabs, one on the upper and another on the lower part, and these separated by an interval which corresponded to the centre, and which healed first. In some cases, the semidiameter of a fungus will heal entirely, before the process of cicatrisation has commenced in the other half.

The number of fungi which are capable of existing on the same individual at the same time, is subject to great variety. I have seen cases when there was only one, and it is remarkable that on these occasions the fungus was, I believe, always extremely sensible. Sometimes I have seen as many as fifty on one patient, and I think it may be said that their magnitude is in general inversely as their number. Whether the fungi be great or small, few or numerous, they are, if not constantly, at least very uniformly of a circular figure. Sometimes two coalesce, and form the figure 8.

What the progress or termination of the disease would ultimately be, if left to itself, I cannot pretend to say, farther than to testify that it would be extremely tedious. Whether it would wear itself out or not, I cannot decide. On several occasions I have made efforts to watch its progress, uninfluenced by treatment, but its course has been uniformly so slow that the patient has become discontented, and I have been obliged to enter on its cure and removal before I could arrive at any satisfactory result. On other occasions, patients, who had been treated for this disease, have returned with the same affection; but whether this arose from any tendency which the disease has to relapse, or to the patient not having remained a sufficient length of time under treatment, I cannot determine, although I believe the latter to be the fact. I have not remarked that the disease becomes more intractable by long standing, or that it is more difficult to remove when it reappears after having been imperfectly treated.

In the whole catalogue of maladies which are capable of being cured or relieved by mercury, I do not know any which exhibits the value of this mineral more remarkably than the disease in question. I believe it matters nought whether this valuable agent be employed internally or externally. If internally, whether it be used as an oxide or salt; if externally, whether it be employed in the form of an unguent, vapour, or fluid; for the disease immediately shrinks as soon as the slightest mercurial action in the system is manifested. I generally retain the patients under care five or six weeks, and use the remedy to such an extent as to cause its gentle but marked influence on the system; and the form in which I employ it is varied according to the peculiar circumstances or convenience of each case.

Although mercury in some form or other, so as to affect the system gently, is the remedy which I now uniformly employ, and with which I always succeed, it is proper to remark that local applications to the fungi, which cannot be supposed to act on the general system, appear to have the power not only of controlling their growth, but also of causing their removal. The operation or influence of these topical remedies is however uniformly slow, frequently uncertain, and often causes the fungi to become extremely painful; and, although they may clear the surface of all the fungi which exist at the time of their application, the impression on my mind is that they do not destroy the disposition to the formation of new ones. Of the local means which I have found most serviceable, I may mention solutions of the sulphate of copper, of the nitrate of silver, and ointments of the subacetate of copper, of tar, and, above all, those unguents into which mercury enters as an ingredient. (*Ibid.*)

INTELLIGENCE.

MONTHLY REPORT OF PREVALENT DISEASES.

The extraordinary mildness of the season has rendered the diseases of the present winter like those of spring or autumn. The constant rain, and consequent damp state of the atmosphere, has rendered Chronic Rheumatism very prevalent; but there has been less than usual of Acute Inflammation; and the Winter Coughs of elderly persons, which during a severe season so frequently prove fatal, have been in general very mild. The popular opinion is that such winters are unhealthy, but we believe this to be a mistaken idea.

BILLS OF MORTALITY FOR 1827.

DISEASES.

Abscesses	84	Erysipelas	20	Palpitation of the Heart	18
Age, and Debility	1724	Fever	755	Palsy	34
Apoplexy	417	Fever, Typhus	92	Paralytic	197
Asthma	955	Fever, Intermittent, or Ague	11	Pleurisy	24
Bedridden	2	Fistula	4	Rheumatism	38
Bile	8	Flux	11	Scrofula	9
Cancer	115	Gout	40	Small-Pox	616
Childbirth	270	Hemorrhage	51	Sore Throat, or Quinsey	16
Consumption	5372	Hernia	46	Spasm	55
Contraction of the Heart	1	Hooping Cough	767	Stillborn	936
Convulsions	2645	Hydrophobia	1	Stone	23
Cow-Pox	1	Inflammation	2356	Stoppage in the Stomach	22
Croup	124	Inflammation of the Liver	136	St. Vitus's Dance	1
Diabetes	3	Insanity	273	Suddenly	107
Diarrhœa	16	Jaundice	43	Teething	503
Dropsy	1075	Jaw locked	3	Thrush	72
Dropsy on the Brain	763	Measles	525	Tumor	21
Dropsy on the Chest	65	Miscarriage	2	Venereal	4
Dysentery	13	Mortification	345	Worms	2
Enlargement of the Heart	17	Ossification of the Heart	9	Total of Diseases	21911
Epilepsy	29				
Eruptive Diseases	24				

CASUALTIES.

Broken Limbs	2	Frighted	1	Scalded	7
Burnt	36	Frozen	1	Starved	6
Drowned	134	Killed by Falls and several other accidents	106	Strangled	2
Excessive Drinking	5	Killed by Fighting	3	Suffocated	4
Executed	6	Murdered	3	Suicides	44
Found dead	17	Poisoned	3	Total of Casualties	381
Fractured	1				

Christened....Males, 15,205—Females, 14,720—In all, 29,925.
Buried ......Males, 11,296—Females, 10,996—In all, 22,292:

Whereof have died—

Under Two Years of Age	6580	Sixty and Seventy	2044
Between Two and Five	1875	Seventy and Eighty	1680
Five and Ten	850	Eighty and Ninety	666
Ten and Twenty	862	Ninety and a Hundred	74
Twenty and Thirty	1565	A Hundred	1
Thirty and Forty	1831	A Hundred-and-One	1
Forty and Fifty	2134	A Hundred-and-Two	1
Fifty and Sixty	2128		

Increased in the Burials this year, 1534;—arising principally from two years being included in the return from St. Leonard, Shoreditch.

☞ There have been executed within the Bills of Mortality, 19; of which number only 6 have been reported as such.

Royal College of Surgeons in London.

Regulations of the Council relating to the Age and Professional Education of Candidates for the Diploma of the College.—I. The only schools of anatomy and physiology recognised, are London, Dublin, Edinburgh, Glasgow, and Aberdeen.

II. Attendance upon the surgical practice of an hospital will be recognised, provided such hospital contain at least 100 patients.

III. No person under twenty-two years of age shall be admitted a member of the College.

IV. The following certificates will be required of candidates for the diploma of the College:—1. Of having been engaged six years, at least, in the acquisition of professional knowledge. 2. Of having regularly attended three or more winter courses of anatomy and physiology, and two or more winter courses of dissections and demonstrations, delivered at subsequent periods. (Two courses of anatomy and physiology in Edinburgh or Dublin, which are of six months' duration, and the accompanying courses of dissections and demonstrations, will be considered as equivalent to the foregoing attendance.) 3. Of having regularly attended two or more courses of lectures on the principles and practice of surgery; one of which shall have been delivered in a recognised school of anatomy. 4. Of having also attended the following lectures, viz. Two courses on the theory and practice of physic of three months each, or one of six months; one course on materia medica and botany: two courses on chemistry of three months each, or one of six months; two courses on midwifery of three months each, or one of six months. 5. And of having attended, during the term of at least one year, the surgical practice of one or more of the following hospitals: viz. St. Bartholomew's, St. Thomas's, the Westminster, Guy's, St. George's, the London, and the Middlesex, in London; the Richmond, Steeven's, and the Meath, in Dublin; and the Royal Infirmaries, in Edinburgh, Glasgow, and Aberdeen;—or, during four years, the surgical practice of a recognised provincial hospital, and, six months at least, the practice of one of the above-named hospitals in the schools of anatomy.

V. Candidates under the following circumstances, of the required age, and who have been engaged five years in the acquisition of professional knowledge, will be admissible to examination, viz. Members, or licentiates in surgery, of any of the legally constituted Colleges of Surgeons in the united kingdom; and graduates in medicine of any of the Universities in the united kingdom, provided they have attended lectures, the practice of an hospital, and performed dissections, as required in Regulation IV.

VI. The required certificates shall express the dates of the commencement and of the termination of attendance on each course of lectures, and dissections: and also of attendance on hospital practice.

VII. The required certificates shall be delivered at the College ten days before candidates can be admitted to examination. By order,

5th day of January, 1828. EDMUND BELFOUR, Sec.

The London and Southwark Midwifery Institution.—This charity was established some years ago, for the purpose of affording professional assistance to poor women at their own houses during confinement in childbed; since which time it has been in active operation, and has hitherto been supported by the exertions of a few individuals. The number of applicants has, however, so greatly increased of late, (upwards of 400 having been relieved during the last twelve months,) that it was quite impossible to carry it on in the same private manner without materially circumscribing its beneficial operations; and hence the original founders of the institution, encouraged as they were by promises of support from a highly respectable number of individuals, have invited the co-operation of the public, in order that they might be enabled to extend its benefits. The following gentlemen have been appointed the medical officers; and, as we understand that such an institution is much required in the district which it embraces, we hope that it will meet with the encouragement it appears so well to merit.

Consulting Physicians.—Dr. OVEREND, 60, Old Broad-street, Physician to the Islington Dispensary: Dr. ROBERTS, 32, New Bridge street, Physician to the Seamen's Hospital, and senior Physician to the South London Dispensary.

Consulting Accoucheurs.—CHARLES WALLER, Esq. 93, Bartholomew Close, M.R.C.S. and Lecturer on Midwifery and the Diseases of Women and Children: EDWARD DOUBLEDAY, Esq. 10, Great Surrey-street, M.R.C.S. &c.

MONTHLY LIST OF MEDICAL BOOKS.

[*Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.*]

A General View of the present State of Lunatics, and Lunatic Asylums, in Great Britain and Ireland, and in some other Kingdoms. By Sir ANDREW HALLIDAY, M.D. & K.H. Fellow of the Royal Society and College of Physicians of Edinburgh, Licentiate of the Royal College of Physicians of London, &c. &c.—8vo. London, 1828.

Observations on the Mortality and Physical Management of Children. By JOHN ROBERTON, M.R.C.S. Edinburgh, &c.—London, 1827.

METEOROLOGICAL JOURNAL,

From December 20th, 1827, *to January 20th,* 1828.

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

December	Rain gauge.	Moon.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A. M.	10 P.M.	9 A.M.	10 P.M.	*9 a.m.*	*2 p.m.*	*10 p.m.*
20			46	49	39	29.43	29.45	90	90	W	WSW	Fair	Fair	Cloudy
21			41	49	46	29.58	29.34	98	98	W	S	—	—	—
23			48	53	45	29.28	29.40	92	98	W	WSW	Cloudy	—	Rain
23			46	55	42	29.81	29.93	90	90	N	N	—	—	Fair
24			44	56	41	29.93	29.97	90	87	W	WNW	Rain	Rain	Fine
25		☽	42	50	45	30.17	30.28	87	94	W	W	Fine	Fine	Cloudy
26			48	52	42	30.32	30.34	97	96	W	WSW	Fair	Fair	—
27			46	52	38	30.36	30.44	98	98	W	NE	—	—	—
28			39	43	35	30.53	30.48	98	98	NE	SSW	Cloudy	—	—
29			36	38	31	30.40	30.27	98	98	WSW	SSE	Foggy	Foggy	Foggy
30			36	43	36	30.38	30.10	96	98	SSW	S	—	—	Fine
31			42	48	42	29.97	29.68	98	98	W	SW	—	Fair	—
Jan.														
1			45	47	36	29.48	29.60	98	98	NNE	N	Fair	—	Fair
2		○	39	50	45	29.77	29.41	98	98	N	SW	—	Rain	Cloudy
3			46	50	34	29.56	29.60	98	90	NW	WNW	Cloudy	Fair	—
4			36	44	32	29.73	29.52	97	95	W	NW	—	Rain	—
5			34	35	34	29.52	29.53	96	98	W	NNW	—	Snow	Fair
6			36	39	33	29.54	29.81	96	98	W	SE	—	Cloudy	Cloudy
7			35	36	33	29.86	29.74	89	92	SE	E	—	—	—
8			34	38	33	29.75	29.85	85	90	ESE	NE	—	—	—
9			34	35	29	29.85	29.77	87	87	SE	E	—	—	—
10		☾	31	34	28	29.57	29.52	85	92	N	SE	—	—	—
11			32	40	36	29.41	29.47	99	99	ESE	SE	Snow	Sleet	Fog
12			38	46	42	29.63	29.51	99	99	WSW	SE	Fog	Rain	Rain
13			44	47	38	29.45	29.45	99	94	W	W	Cloudy	Cloudy	Cloudy
14			43	45	35	29.37	29.40	99	98	NW	NE	—	—	Rain
15			35	37	31	29.48	29.61	99	98	NE	NE	—	Rain	Snow
16		●	38	40	38	29.68	29.68	99	98	NE	SE	—	—	Rain
17			46	50	49	29.68	29.93	96	94	SW	SW	—	—	Cloudy
18			54	56	46	30.04	30.06	98	89	SW	WSW	—	Cloudy	Fair
19			49	55	47	30.13	30.13	86	90	WSW	SW	Fair	Fine	—

ERRATUM.

In our last Number, for Dr. JAMES, read Mr. JAMES.

THE LONDON
Medical and Physical Journal.

N° 349, VOL. LIX.] MARCH, 1828. [N° 21, New Series.

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL PAPERS,

AND

CASES OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER AUTHENTIC SOURCES.

FEVER.

Observations on Fever. Addressed to a Medical Friend, by Dr. Bow, of Alnwick.

According to promise, my subject must be the theory of fever, although it is one I would willingly decline; for I now think I was presumptuous when I proposed to enter a field where so many able men have toiled. Nevertheless, the sources of those symptoms to which the term fever is attached are still concealed; and, since profound research, skill, and ingenuity have failed, chance may direct the steps of the humblest labourer, or a lucky thought may give the clue by which the mystery may be unravelled: this can alone support an adventurer such as I am, and be his only apology for venturing to meddle with this most difficult of all speculative subjects.

You will agree with me that a theory of fever is wanted: one, at least, which might in some degree guide the practitioner; for even now, notwithstanding the many that have seen the light, we are forced to acknowledge that we grope in the dark, and to confess that our practice owes its success more to chance than to science. I know it to be the opinion of some that a rational and successful plan of treatment may be found independent of the knowledge of the proximate cause of fever. In this opinion, however, I cannot coincide; for, although we be successful in our practice, and therefore call our plan rational, we but combat a symptom as it appears with the remedies with which experience has armed us, and we anticipate another which experience teaches us to expect, but we know not what gives birth to the one, nor how the action we induce operates in preventing the other. A knowledge of the origin of the phenomena of fever cannot be prejudicial to the practitioner; neither can an attempt to investigate it render him who makes it less skilful in his art. Perhaps our physiological knowledge has not arrived at that perfection which might authorise us to pronounce upon the functional derangements which give rise to symptoms, yet I think careful observation, induction from physiological facts, a proper application of pathological research and experiment, and a judicious culling from the theories extant, may yield principles approaching to truth, and convey to us some idea of the nature of fever. CULLEN put so much value on the knowledge of the proximate causes of diseases, that he believed the cure to be founded chiefly, and almost unavoidably, on that knowledge; and it was with a view to the better conducting of the practice in fevers that he reared his theory, a structure which, as Dr. GOOD remarks, "if it be at this moment crumbling into decay, certainly is not falling prostrate before any fabric of more substantial materials, or more elegant architecture."

Every unbiassed physician believes with Cullen that the phenomena of fever in its earliest stage depend on some remote cause acting immediately on the nervous system; and, if the symptoms themselves did not point to this origin, the very sudden invasion of fevers, in many cases, is sufficient to warrant the conclusion.

The remote causes are certain sedative powers which diminish the energy of the brain. Though there be yet much to learn regarding the functions of the brain, I think, if we pursue our inquiry with the knowledge we do possess, we may arrive at something satisfactory. For the sake of distinctness, let me explain what I understand by the energy of the brain, or rather in what sense I wish to be understood. By energy, I understand activity, a mere quality. By nervous influence, I mean the nervous fluid secreted by the brain and spinal marrow, and emanating from them. It appears that there are modifications of this influence, flowing by separate and distinct nerves; or, if not, the nerves themselves are so modified that, carrying the same matter, they perform separate and distinct functions. Such a modification was at first suspected, and is now proved by experiment; one set of nerves producing the effect of sensation, another set the effect of motion. But there is another modification, it is strongly suspected, either of nerve or nervous influence, which is supposed to play an important part in the animal economy, which, were it substantiated by experiment or otherwise, would, I think, enable us to thread the pathology of fever; and, in my opinion, the arguments in favor of such a modification are of more weight than those opposed to it. It is that modification of nerve or nervous influence which is supposed to effect secretion. The nervous hypothesis of secretion appears to me to be the only plausible explanation of this operation,—the only one which can be fairly and legitimately adopted; and, indeed, the objections brought forward by its opponents are attempts made rather to weaken the inferences drawn in its support, than facts directly opposed to it. Having said thus much, I think it incumbent on me to advert to some of those objections, and I trust you will pardon the digression, not only because secretion is a subject in itself highly interesting, but because, unless we can form some idea of the real nature of the function, we may bid adieu to the hope of tracing the proximate causes of idiopathic diseases.

Dr. Good concludes, with Sir E. Home, that "the organs of secretion are principally made up of arteries and veins, but there is nothing in the different modes in which these vessels ramify that can in any way account for the changes in the blood, out of which secretions arise." These organs being largely supplied with twigs of small nerves, naturally gave rise to the idea that through their instrumentality is secretion effected. In support of this view, Sir E. Home observes, "that, in fishes which are capable of secreting the electrical fluid, the nerves connected with the electrical organs exceed those that go to all the other parts of the fish, in the proportion of twenty to one; and, in confirmation of this view of the subject, Dr. Good remarks, "that there are no parts of the body more manifestly affected, and few so much so, as the secretory organs, by mental emotions. "The whole surface of the skin is sometimes bedewed with drops of sweat, and even of blood, by a sudden paroxysm of agony of mind; grief fills the eyes with tears; fear is well known to be a powerful stimulant to the kidneys, and very generally to the alvine canal; anger gives an additional flow, perhaps an additional acrimony, to the bile, and, if urged to violence, renders the saliva of some animals poisonous; and disappointed hope destroys the digestion, and turns the secreted fluids of the stomach acid." Although the above seems to prove that the secretory organs are chiefly influenced by the sensorial system, yet it is denied that secretion is effected by nervous influence, because HALLER observed that the larger branches of the nerves seldom enter into the secretory organs, and seem purposely to avoid them; because the secernent glands have little sensibility; and because the secretions of plants, which have no nervous system, are as abundant and diversified, and as wonderful in every respect, as those of animals. In all this I do not see one valid objection: it is now known that there are two distinct classes of nerves, independent of the great sympathetic,—the motor nerves, which can have no necessary connexion with the secernent glands, do avoid them, and even that perhaps purposely; and, if the glands possess but little sensibility, although largely supplied with twigs of small nerves, it is evident that all these twigs cannot proceed from sentient nerves, and, as no other nerves are acknowledged but those arising from the brain, spinal marrow, and great sympathetic, it is evident they must proceed from the last mentioned; the more especially as branches from the great sympathetic can be traced to every gland and every secreting surface.

Plants are living structures to be sure, but they differ from animals, inasmuch as they exhibit neither signs of sensation nor of voluntary motion: consequently we do not expect to find in them either nerves of sensation or of volition. They differ in another point of view, which ought to lead us to think that the operations in the vegetable kingdom are principally effected by external influence: the laboratory of the vegetable kingdom is external, whilst that of the animal kingdom is internal. In this respect, plants are indeed the inverted animals of Dr. ALSTON. LINNEUS has been blamed for too fondly searching after analogies by which he might approximate the vegetable to the animal system, but it would appear that we are possessed of a similar propensity, since we reject a plausible explanation of an operation carried on in the animal, because, forsooth, we cannot analogically explain a seemingly similar operation going on in the vegetable. That the sunbeam possesses rays endowed with a deoxidizing power, the analysis of light has revealed to us. By exposure to these rays, and to atmospheric action, is the sap modified in the leaf; it is then conveyed to the cells in the parenchyma, where, by further exposure, it is fitted for the purposes required of it; and as in the light plants produce oxygen gas, when in the dark they do not, we can only conceive that oxygen is separated in consequence of some new combination effected through the agency of light. Thus light may effect the decompositions and recombinations necessary to the vegetable, whilst nervous influence performs these processes in the animal: hence vegetable secretion is influenced by locality and the seasons, animal secretion by whatever perceptibly operates on the nervous system.

Dr. BOSTOCK's principal objection to the nervous hypothesis, and which, by the bye, he brings forward as a direct argument in opposition to it, is, that secretion appeared to be produced in fœtuses which had no nervous system. I have no opportunity of examining the cases cited, but, admitting that in all of them the brain, cerebellum, and spinal marrow were wanting, it does not follow there was no nervous system, for in similar cases the sympathetic nerves have been found perfect; and, if the great sympathetic has more than one function, I am inclined to believe that secretion in general is performed through its instrumentality. Organs so important as the brain and spinal marrow are protected from external injury by their bony casements, but the sympathetic, although it has no such covering, yet, from its situation, it is still better protected, and, as nature does nothing without an object, we might infer that its functions are highly important. And what function, the due performance of which is more necessary to health and life than secretion. Sensation or voluntary motion may be impaired or almost wholly destroyed without necessarily causing death, yet these are functions performed through the instrumentality of separate and distinct nerves. Secretion is a function which cannot even in part be destroyed without endangering life, yet we deny that this function is performed through nervous agency, although we can trace nerves proceeding to the organs of secretion, knowing at the same time that they are nerves neither of sensation, nor of voluntary nor of involuntary motion.

I have said that, by nervous influence, I mean the nervous fluid secreted by the brain and spinal marrow; but, by saying so, I do not wish to be deprived of the privilege of supposing that nervous fluid may not be secreted by the great sympathetic, and emanate from it also, for I do not think that BICHAT was altogether incorrect in supposing that this nerve is independent of the great system of nerves. Anatomists do not say that the sympathetic arises from the sixth pair; for it is supposed that, instead of receiving filaments, it gives filaments to that pair. Or, according to SHAW, "when the foramen caroticum is opened, a plexus of nerves will be found surrounding the carotid artery, which appear to be united with the sixth; but which, when carefully traced, will be found to pass over the sixth, to unite with the casserian ganglion of the fifth. There will also be branches seen passing along the vidian nerve, to form in union with it the ganglion of Meckel." From repeated dissections, Mr. Shaw concludes that the fifth pair resembles the spinal nerves in every respect; and by the fact that many of the branches of the sympathetic *go to* the ganglionic portion of the fifth, it is proved, he says, that even the connexion between the sympathetic and fifth is *similar* to the union of the sympathetic with the ganglionic roots of the spinal nerves. Notwithstanding this similarity of connexion, Mr. Shaw, it will be observed, in speaking of the branches of the sympathetic which join the ganglion of the fifth, constantly says that they go to the ganglion; whereas, in speaking of the spinal nerves, he says, " we shall find that each nerve has a double root,—i. e. one from the anterior and the other from the posterior column of the spinal marrow; that the one from the posterior has, immediately before it joins with the anterior, a ganglion formed upon it; and, if we carefully examine this, we shall find that from each ganglion a small nerve is *sent off* to join with the sympathetic."* The mode in which the sympathetic proceeds to and joins the casserian ganglion evidently proves that we are correct in saying that branches pass over the sixth pair to unite with this ganglion; and consequently, in describing the branches which pass off from the casserian ganglion, Mr. Shaw takes no notice of the sympathetic; whereas, since he has proved the union of the sympathetic with the ganglionic roots of the spinal nerves to be similar to the connexion between the sympathetic and the fifth, we certainly ought to believe, from analogy alone, that the sympathetic rather gives than receives a branch from the ganglionic roots.

The idea that the sympathetic is an independent nerve is almost confirmed by the observation that it has been found perfect in monsters in which the brain and spinal marrow have been found deficient; but this, it is said, forms no argument for its independency, for in such creatures the spinal nerves are also found, which are acknowledged to have their origin from the spinal marrow.†

This, however, appears to me not only to form no argument against the sympathetic being an isolated nerve, but to form one in favor of its being instrumental in assimilation, Mr. Shaw, who opposes the inferences drawn from the effects which follow the division of the par vagum, says that the same deductions have been drawn from experiments where the par vagum and sympathetic have been cut, as from those where only the par vagum was divided. This, however, so far from weakening the inferences drawn in regard to the par vagum, gives us cause to impute a similar power to the sympathetic,—viz. that it also is a nerve of secretion. If the stomach depended altogether on the sympathetic system of nerves for its supply of nervous influence, health, nay life itself, could be but the tenure of a moment, liable to be extinguished even by the ingesta meant to support it. But, to guard against this, the stomach has been provided with a pair of nerves derived from the brain, through which, when a supply of gastric fluid is required, is the influence necessary to its secretion transmitted. Were it not for those nerves, the demand for nervous influence must have been made on the sympathetic system, and the supply granted at the expense of other vital organs. Even as it is, when nervous energy is very low, danger constantly attends a sudden call for nervous influence. A full meal to a person reduced to the last extreme by hunger is followed by death, because, as the brain cannot immediately supply the necessary influence, the ganglionic system is drained for the purpose, and the heart ceases to pulsate: in like manner, a cathartic one, reduced by disease, causes death by determining to the gut the little of influence with which the ganglionic system is then supplied. In fishes, the great sympathetic is extremely slender, but, as if to compensate for this, the eighth pair is remarkable for its size and distribution: a branch of it even extends under the skin as far as the tail-fin,* evidently for the purpose of effecting the secretion of that slimy fluid which protects the skin. In the skate, that slimy fluid issues from ducts which terminate on almost the whole surface of the skin. These ducts Dr. MONRO has traced from central parts, from whence they radiate, and there a pair of nerves terminate, which, before they divide, are nearly as large as the optic.† For what purpose, then, are such large nerves sent to these ducts, if it be not to effect the secretion of their contents.

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* Manual of Anatomy, by JOHN SHAW.

† SHAW on the Superadded Nerves, (London Medical and Physical Journal, vol. 59.)

Some of the oppositionists to the nervous hypothesis not only deny that the nerves are concerned in the process of secretion, but they would have us to believe that in some instances nervous action retards and disturbs the process. Nervous action is found in some instances even to retard and disturb the assimilating process; for it is a matter of observation that, in many cases of hemiplegia, where the nervous power is withdrawn or impaired, digestion goes on better than in ordinary health, and an obstinate ulcer has been found to heal quickly after the limb was struck with palsy."*

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* Outlines of Comparative Anatomy, by ANDREW FIFE.

† Ibid.

Were I to search for facts as arguments in favor of the hypothesis, I should certainly draw upon the above, and infer that digestion depends upon nervous, inasmuch as, in many cases of hemiplegia, it goes better on than in ordinary health. We have no proof that, in many such cases, nervous influence is not secreted: we know, however, that it is not transmitted as usual to the paralytic members, and therefore it is but reasonable to suppose that other parts of the body will be better supplied. Upon the same principle, opiate frictions improve digestion, and accelerate the healing of ulcers.

As there are at least grounds for supposing that secretion is a nervous process, we cannot help forming to ourselves some idea of the nature of that process; and, if our ideas do not actually militate against any known law of the system, there can be no harm in arranging them even on assumption.

Let us suppose the blood to be acted on by the nervous influence, after the manner in which fluids are acted on by galvanism, and we can conceive no apparatus more exquisitely fitted for the purpose of secretion than a gland. In a gland, the arteries soon become so minute that they cannot carry forward the grosser particles of the blood: these are returned by the veins, whilst the finer stream is carried towards the secretory duct; but in its passage there, and in its most extenuated state, it is subjected to the decomposing power of the numerous small nerves which proceed from the sympathetic; its elementary affinity is subverted, and the minuteness of the vessels which favored the decomposition favors likewise the recombination; and, as the absence or presence of one atom is only necessary to change in toto the appearance and properties of matter, so we have, according to the force of the decomposing power, and the circumstances under which the recombination takes place, a diversity of fluids, differing more or less from the fluid furnishing the elements.

Yet, after all, the admission on all sides that the nerves possess an influence over the secretory organs, is sufficient for my purpose. The remote causes of fever being certain sedative powers which diminish the energy of the brain and nervous system, let us inquire what we ought to expect from such diminished energy. As the general condition both of body and mind depends upon the operative state of the brain, these must become enfeebled in all their powers, as a natural consequence of diminished energy of that organ. This enfeebled state is manifested by listlessness, dejection of spirits, and muscular debility.

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* Elements of Medical Logick, by Sir G. BLANE, Bart.

But there are other symptoms, which our knowledge of the functions of the nervous system enables us to trace to the same cause. We know that the capillary arteries are under the influence of the brain, that they forward their contents by a power regulated by it; and the knowledge of this fact explains to us why paleness of the face, and cold sensations on the surface of the body, are invariably among the primary symptoms of fever. For, owing to the want of power in the vessels to carry on the circulation, the blood forsakes the surface: hence, were nervous influence present sufficient even for the evolution of heat, one material necessary to its production is in a great measure wanting. The diminished energy of the brain is sufficient in itself to account for the low quick pulse, but, as the heart is also influenced by its contents, we may there detect an additional cause of this symptom.

The change which the blood undergoes in the lungs is altogether depending on the nervous influence: if this influence, then, be not supplied in due force, that change cannot be duly effected, and the heart can only receive blood wanting in its stimulating principle. As all nerves require a regular supply of influence in order to the due fulfilment of their functions, all must be affected more or less when the energy of the brain becomes impaired; therefore the nerves supplying the respiratory apparatus share the effects. The diaphragm cannot contract as it ought to do, and the muscles destined to raise the ribs are unfitted for their office: hence the sense of weight or anxiety about the precordia, occasional sighing, or hurried breathing.

The particular sensation of cold of the back and pain of the loins may be referred to venous congestion, caused by the retrocession of blood from the surface pressing on the dorsal and lumbar twigs as they emerge from the spinal canal; for we know that pressure or irritation of a nerve in its course may give rise to unpleasant or painful sensations at its extremity, while the same pressure on the motor twigs must undoubtedly be the cause of the rigors. In the latter opinion I am, I think, in part borne out by the fact that, in those dying in the cold stage of ague, such congestion is found; and also by the observations of Bell and Shaw; for, when they irritated or simply pressed those twigs between the blades of the forceps, they observed that the muscles to which they proceeded were spasmodically affected.

As these and all other symptoms which manifest themselves during the cold stage of fever, may be traced directly or indirectly to impaired nervous energy, I shall, in the next Number, pass to the second stage, or that of excitement.

VACCINATION IN AFRICA.

On the departure of Lieutenant James Holman, R.N. the celebrated blind traveller, for Africa, I begged the favor of him to procure for me some authentic information respecting the present state of small-pox and vaccination in the Negro country, and I supplied him with a few queries calculated to direct his inquiries. He has just transmitted to me the accompanying communication from W. Fergusson, Esq. surgeon of the Royal African Colonial Corps, which appears to me to possess sufficient interest to merit a place in the pages of your excellent Journal.

I am your obedient servant,

GEORGE GREGORY.

London; December 19, 1828.

Replies to Queries on Vaccination and Small-Pox.

By W. Fergusson, Surgeon Roy. Af. C. C.

1st. Is vaccination generally practised among the infant negro population?

2d. Whence do they derive their stock of lymph?

3d. What is the degree of confidence placed in it?

Vaccination is not at all practised among the negro population by native vaccinators; it is, however, practised among certain branches of the negro population by European surgeons. The negro population of Sierra Leone consists of Nova Scotian and Macroon settlers, liberated Africans, and several of the aboriginal African tribes, such as Limmaners, Mandingoes, Soosoos, Sherbros, &c. &c. &c. The three first mentioned of these branches of the negro population, having greater intercourse with Europeans, are better acquainted with European customs, and have, of course, imbibed more of European notions and prejudices on such subjects as the one now under consideration, than the aboriginal inhabitants of this part of Africa: vaccination therefore is, and has been, practised among them to a considerable extent; the stock of lymph being derived from, and kept up by frequent renewal from England. That their confidence in it as a measure preventive of small-pox is great, I judge from the anxiety which they show, and the eagerness which they manifest to have their children vaccinated, when small-pox is raging round them; while, under ordinary circumstances, and when their fears have been lulled by the absence of this fatal epidemic, (an absence which they well know is probably but temporary,) they exhibit such an unaccountable apathy regarding vaccination, that a stranger might well suppose they had no faith in it at all as a prophylactic measure. Notwithstanding this, I believe they have great confidence in it, although, from circumstances to which I shall presently allude, that confidence has, I believe, declined considerably.

4th. How soon does the areola arrive at its greatest height in these countries?

The areola surrounding the vaccine vesicle is, I think, at its greatest height about the eleventh or twelfth day after vaccination, if the lymph used has been genuine.

5th. Does small-pox prevail there?

6th. Does small-pox prevail there after vaccination?

Small-pox prevails occasionally, and there are instances of its having occurred even in a confluent form after vaccination. One genuine instance of this kind came under my notice in the year 1824, in the person of a liberated African girl, of about sixteen years of age. Vaccination had been performed in this case by the late Dr. Nicol, deputy inspector of hospitals, and was considered satisfactory. The case proved confluent. The secondary fever was accompanied by severe diarrhœa, which carried off the patient about the thirteenth day. Another well-authenticated instance of the same fact occurred in the early part of the present year, in the family of a respectable Nova Scotian settler. Other cases of a similar nature have been reported by the inhabitants; but I do not consider that in these cases the proofs of a pure previous vaccine disease have been satisfactorily established. When vaccination has been carried on for some time from the same stock of lymph, the disease is apt to degenerate and become spurious; from which cause we require a frequent renewal of lymph from England, in order to keep it in continuous and successful operation. The spurious disease, on the fifth day, generally shows itself in the form of a small globated papula; on the eighth day, it presents sometimes an ash-coloured pustule, containing purulent matter; at other times, and less frequently, a brown-coloured scab, having a small quantity of purulent matter under it, capable of producing, by inoculation, a disease similar to itself. The great prevalence of a disease among the negro population called *Craw craw* is considered as materially influencing that change in the properties of the pure vaccine lymph which has been just noticed. That apathy and indolence, of which I have already accused the negro population, leads them to consider the appearance of disease in the arm after vaccination as the test of safety from small-pox. Great as the difficulty sometimes is in getting them to bring forward their children for vaccination, it is still greater to procure the necessary examinations in its progress and maturation. The mere appearance of disease in the arm is supposed to carry along with it immunity from small-pox; and, on the occurrence of the epidemic at an after period, it may be easily foreseen how wretchedly and how fatally this confidence in the spurious disease may be misplaced. I, therefore, do not consider that, in all the cases spoken of among the inhabitants as cases of small-pox occurring after vaccination, there existed satisfactory proofs of the patient's having previously undergone the genuine vaccine disease; yet I am sorry to say that, from such occurrences as these, vaccination has rather lost ground in the opinion of the negro population.

7th. Is small-pox an increasing malady?

Small-pox is not an increasing malady: it is generally introduced here from the slave cargoes of vessels detained by the squadron, and sent here for adjudication. Were this source of its renewal removed, I am persuaded that small-pox would, in the course of a few years, be almost unknown in this part of Africa.

8th. Can the vaccine virus be retained on points and glasses, so as to be fit for use?

The vaccine lymph, if taken on points, will not retain its power seven days in this country. This observation is established by repeated trials. If taken on glasses, I would not be disposed to depend on its activity when kept longer than fourteen or sixteen days, though I have known it sometimes to retain its original properties for four or five weeks. If preserved in glass bulbs hermetically sealed in the manner practised by the National Vaccine Institution, I have known its properties unimpaired after keeping for three months. Repeated trials have convinced me of the excellence of this mode of preserving the vaccine lymph, and I believe it to be the best and surest that has been yet devised of transmitting the lymph from England to tropical countries: next to this method, I believe the crusts have proved most successful.

9th. Are there periodical vaccinations of large districts, or is each child vaccinated soon after its birth: if the latter, how soon?

The practice in these cases is, as long as the vaccine lymph continues to produce a genuine disease, to keep it up by the weekly vaccination of all comers. Children are rarely vaccinated under four weeks old, but there is no rule observed on this head.

10th. What sort of scars are usually left in the arms?

The scar bears the shape of the original vesicle, and is slightly depressed below the surface of the surrounding skin. The surface of the scar is marked by a number of small depression's of various shapes, corresponding, I believe, with the cells in the original vesicle.

11th. Is vaccination in hot countries attended with feverish symptoms? If it is, on what day do they begin?

Vaccination is sometimes in this country attended with feverish symptoms; but, in the most marked cases, so far as I have seen, these symptoms have been so slight as almost to escape common observation. I have not remarked on what day they begin.

12th. Is vaccination ever followed by any eruptions?

I have seen only one case of this: an eruption appeared on the sixth day after unsuccessful vaccination: it was diffused over the whole body, and is now in progress.

Sierra Leone; September [illegible]27.

N.B.—The case alluded to in the last of the above replies was in the first instance a papular eruption, the base of each papula being surrounded by an inflamed ring. The eruption was thickest on the thorax and on the arms. In its progress the eruption became pustular, the pustules being in circumference about half the usual size of the vaccine vesicle. On the twelfth day, the crusts had dropped from some of the smaller pustules; and, by the seventeenth day, they had all dropped off, leaving a mark, but not in any manner pitted, and which I do not think promises to be permanent.

BERIBERI.

Observations on the Nature and Treatment of Beriberi.

By William Hamilton, Esq. Royal Navy.

By the different authors who have touched upon the subject, from the days of Bontius (who first described the disease, and gave it a place in medical nomenclature,) down to those of Dr. Christie, and from his time to the present, Beriberi has been considered as a disease of debility, in the cure of which any thing approaching to a depletory mode of treatment has been most religiously avoided. Finding, from a medical friend lately returned from India, that little or no deviation from the accustomed practice so long pursued in such cases had taken place at the time he quitted that country, in June 1825,—a short time previously to which beriberi had proved more than usually fatal, particularly in the northern division of the Madras settlement,—I have, at the request of the individual alluded to, been induced to communicate, through your Journal, the following observations on the nature and treatment of this complaint, as tending to favor the propriety of a very opposite mode of practice to that so generally had recourse to for its cure. My object being chiefly to confine myself to facts, and by a simple statement of such lead the attention of others to the subject, I shall, in the course of my remarks, avoid, in as far as possible, touching upon such points as would naturally involve either hypothesis or theory.

This very singular endemic (occurring in particular parts of the East Indies, and which, I believe, has not been described as having existed in any other quarter of the world,) appears to be principally, I may say almost entirely, confined to the Island of Ceylon, the Malabar coast, and that tract of country reaching from Madras as [illegible] north as Ganjam, and in no part extending inland more [illegible] forty miles, forming what is called the northern division [illegible] the Madras settlement. It is most prevalent during the decline of one monsoon and setting-in of the other, when the atmosphere is completely loaded with cold, raw, damp vapours, and the vicissitudes of temperature are greater than at any other period of the year; and though in a less degree does a residence in the neighbourhood of the coast seem essential for its production, than a stay for some months on a station where it prevails, yet the instances are comparatively rare where it has been found to occur at a distance from the sea exceeding sixty or seventy miles.

Individuals of very different constitutions and habits of body seem liable to be affected by it; but such as lead a sedentary and debauched life, and who are much exposed to vicissitudes of weather and sudden changes of temperature, are unquestionably those most subject to its attacks; and an individual once having suffered from it appears more liable to a future attack than one who had never been the subject of it.

I have only had an opportunity of seeing the disease under two forms: viz. that in which the symptoms were at first mild; and gradually increased in severity; and that in which the symptoms were even from the first rather urgent, increased more rapidly, and, unless speedily relieved, soon led to the most alarming appearances, and finally proved fatal. There is another variety mentioned by Dr. Christie, which that author considers equally fatal, and in which "there was not any swelling observable externally, but the patient, with the other symptoms, had evidently the bloated leucophlegmatic face of a dropsical person." Dr. ROGERS, of the Hon. East India Company's Madras establishment, likewise mentions this variety of the complaint, in a Thesis written by him, and printed at Edinburgh in the year 1808. "Hydrops asthmaticus," says he, "tumore nullo externo comitante, nobis ante oculos interdum versatus fuit; his autem in exemplis ægro exitium semper attulit; vultusque et tumidus et leucophlegmaticus, hydrope laborantis sane proprius ægrotanti fuit." This form of the complaint I have never seen. The first case that fell under my care was one in which the disease appeared under its milder form. There was from the commencement slight dyspnœa, with stiffness of the lower extremities; pulse quick and sharp; skin dry and rough. Supposing it only a slight feverish attack, (the individual having been exposed the preceding night to the damp and cold winds which prevail during the change of monsoon,) I prescribed a solution of emetic tartar, to be given in small repeated doses, for the purpose of acting on the stomach, bowels, and skin, and directed that he should be kept warm; having very little doubt that, by next morning, I should find my patient much relieved. To my great mortification, however, I found all the symptoms much aggravated, particularly the stiffness he complained of in his legs and thighs, which now amounted to an almost complete paralysis. From this time there was no mistaking the nature of the complaint; and, though I strictly followed the plan of treatment recommended by Dr. Christie, and by him found so successful, the poor fellow died on the evening of the tenth day from the commencement of the attack, having for some days previously laboured under all the symptoms generally present in beriberi. This body, from particular circumstances, I was prevented examining.

In the second case which I had an opportunity of attending, the disease, from the time that I first saw it, appeared under its more aggravated form. The symptoms were as follow:—Great debility, with difficulty of respiration; a sense of weight and oppression at the lower end of the sternum; and an almost paralytic state of the thighs and legs, which, soon after the commencement of the attack, became œdematous, as did also the face, and indeed the greater part of the body; with a general sensation of coldness over its surface; pulse 120, small, feeble, and intermitting. All these symptoms went on increasing until the death of the patient, which took place within forty-eight hours from the time he was first attacked. A short time previously to his death, he was seized with a violent fit of vomiting, spasms of the abdominal muscles, and increased dyspnœa, which carried him off.

Though the plan of treatment recommended by Dr. Christie had in the first case proved unsuccessful, such was my confidence in that author, from the very decided manner in which he speaks of his success, that I was a second time induced to follow his footsteps in the treatment of this complaint; but, I am sorry to say, as unsuccessfully as before. I now determined to examine the body, and, if possible, discover some indication or other by which I might be guided in my future treatment of the complaint, should a case of the kind again occur to me. I shall here state the particulars of this examination, together with the mode of treatment I was afterwards led to adopt, by which I succeeded in completely curing my next three patients; in two of whom the symptoms were, in the first instance, still more alarming than in either of the cases which terminated fatally. Leaving the country soon afterwards, I was deprived of an opportunity of giving it a more extensive trial.

I carefully examined the contents of the cranium, thorax, and abdomen. Upon removing the skull-cap, I found upwards of an ounce of serum effused between the dura mater and tunica arachnoidea; and in two or three different places there appeared dark red-coloured patches, one of which was exceedingly vascular, and extended into the substance of the brain, to the depth of from a quarter to half an inch. There was likewise found considerable effusion in all of the ventricles except the fifth, or that cavity formed by the separation of the laminæ of the septum lucidum. In the base of the cranium, upon the brain being removed, there appeared upwards of four ounces of fluid tinged with blood. The lungs were very much loaded with dark-coloured blood; and in both cavities of the thorax there was found extensive effusion. The heart was of a pretty healthy appearance; nor did the pericardium seem to contain a much greater quantity of fluid than that generally found in it; both on its external surface, however, and likewise internally, there existed very evident marks of inflammation.

The diaphragm, particularly towards the right side, appeared considerably inflamed. The stomach was of a healthy appearance, and contained about six ounces of a dark brown-coloured liquid. The liver was very evidently larger than natural, and appeared even still more loaded than the lungs: on cutting through its substance, the blood, from different points, trickled out almost in a continued stream; and indeed all, even the most minute, vessels seemed completely gorged; as were likewise those of the mesentery and pancreas. In several places on the surface of the intestines there appeared a sort of efflorescence, but, upon the whole, they presented nothing very remarkable. From three to four pounds of fluid were found in the cavity of the abdomen; and in the cellular texture, almost all over the body, there existed very extensive effusion. On examining the spinal marrow, there was found to exist the same evident marks of congestion as in the liver, lungs, &c. almost along the whole of its course, though that more particularly in the dorsal region. No other deviation from the natural healthy appearance of the parts was found to exist.

Dr. Christie mentions, that in many of the subjects he examined who had fallen victims to this disease, there was a remarkable obesity, even after a long continuance of it, and the use of mercury, antimony, and other powerful medicines. This I found to be the case in the individual whose body I examined; but he was naturally of a full habit of body, and in him the disease had not existed long.

Having fully satisfied myself, from the post-mortem appearances, that the dropsical affection and other symptoms in the case of the individual whose body I had an opportunity of examining, (and I have little doubt in every other where the disease occurs,) arose from obstructed circulation, in consequence of congestion in the internal organs; and that beriberi consequently could not be considered a mere disease of debility as described by the celebrated Bontius, and more recently by Dr. Christie, Mr. Hunter, Mr. Colhoun, and others, but a disease in the treatment of which depletion might be had recourse to with the greatest possible advantage, I fully determined, should an opportunity again present itself, (regardless of the apparent debility of the patient on the one hand, or of the doctrines of the humoral pathology on the other,) to try the effects of blood-letting, for the purpose of assisting other means in exciting reaction, determining towards the surface, and restoring the balance of circulation. For this end, in the following case, thirty ounces of blood were, upon my first seeing the patient, taken from the arm *pleno rivo;* which, from the immediate relief it afforded, I was induced to repeat: and accordingly, about twelve hours from the first bleeding, the dyspnœa and other symptoms, though much relieved, still continuing troublesome, twenty-five ounces more were drawn off in a full stream, which was followed by the same evident good effects as on the former occasion. I felt inclined even a third time to repeat the bleeding, and certainly would, had the individual been of a full habit of body, or had the disease occurred to me in a climate where debility and general relaxation were less liable to follow free depletion, and where a practitioner might, with comparative safety, carry the use of the lancet to a greater height than he would be warranted doing in a climate such as that of India.

Having resolved not to push venesection further, I had immediate recourse to mercury, upon which I now determined principally to rely in the cure of the disease, having every hope of saving my patient, provided I could succeed in bringing him speedily and effectually under its influence. Its well known effects as a great, universal, and permanent vascular stimulus, as an equaliser of the circulation, and as taking off determination from particular parts, —its diuretic effects when combined with diuretics, and diaphoretic when combined with diaphoretics, render it a medicine peculiarly well adapted for the cure of beriberi.

Soon after the second bleeding, I directed twenty grains of calomel, with thirty drops of laudanum, to be given, and had the patient laid upon the frame of a common sea-cot, having an open ratan bottom, under each end of which was placed a block of wood, for the purpose of raising it a certain distance from the ground. A blanket, having a hole cut in it sufficiently large for allowing the head to protrude, was now thrown over all, and brought close down to the ground at the ends and on each side. Two crucibles, containing ignited charcoal, were then placed under it; by means of which the whole surface of the body was freely exposed to the fumes of the Hydrargyri Oxydum Cinerium, some of which was from time to time thrown into the crucibles. This I continued for upwards of half an hour, when, the patient feeling faint, the crucibles were removed, and the body enveloped with the blanket which covered it during the fumigation.

An hour and ten minutes having elapsed from the time the calomel was given, the dose was now repeated, with the same quantity of laudanum as before: soon after which he fell into a sound sleep, and continued so for upwards of three hours. Upon his awaking, I found him in a state of copious perspiration, the pulse increased in strength, and the dyspnœa not near so troublesome. I now again repeated the calomel, with six grains of gamboge, for the purpose of acting on his bowels, and omitted the laudanum; had also the crucibles replaced, and the body again exposed to the fumes of the Hydrargyri Oxydum Cinerium; which, from this time, together with scruple doses of calomel, and friction over the surface of the abdomen and thighs with the Unguentum Hydrargyri Fortius and Liquor Ammoniæ, was repeated from every three to four hours until ptyalism was fully established, (which, notwithstanding the very active means had recourse to, required from forty to forty-eight hours to effect;) after which every unfavorable symptom began speedily to disappear, and the patient's principal complaint was the soreness of his mouth.

The particulars of this case, which are nearly similar to that of two others which fell under my care, and in which the same mode of treatment proved equally successful, I beg leave to subjoin, as copied from my notes taken at the time.

I may here add that, in one of the cases, there was from the first violent vomiting, which soon, however, yielded to large and repeated doses of calomel and laudanum, together with the application of strong mustard sinapisms, at from 150° to 160° of Fahrenheit, to the region of the stomach; which I have likewise found singularly successful in speedily allaying the violent gastric irritability, in cases of bilious remittent fever and cholera, where the calomel and laudanum alone had completely failed of success. The individual being of a rather full habit of body, and the pulse, after the first and second bleedings, continuing strong, blood-letting was in this case a third time had recourse to; the patient losing in all upwards of sixty-five ounces of blood within the space of thirty hours, and that with the happiest effects, notwithstanding that the dropsical and other symptoms had existed for nearly two days previously to my seeing him, and that the anasarcous swelling, in the interval between the bleedings, had very considerably increased.

The above observations were chiefly written during the progress of a voyage from the East Indies to England, in the year 1822; since which time I have had an opportunity of perusing Mr. MARSHALL's Notes on the Medical Topography of the Interior of Ceylon, in the which mention is made of two or three cases of this disease, where the dyspnœa was very troublesome, and for the relief of which blood-letting was had recourse to with immediate advantage. Mr. M.

however adds, that "a more extended clinical experience is still necessary before a due estimate can be made of the effects of the depletory means of cure." I have much pleasure in being able to contribute my mite to the testimony of Mr. Marshall in favor of a mode of treatment, which I have no hesitation in saying, whoever would successfully combat this "hydra disease" would do well to adopt.

In addition to the cases mentioned by Mr. Marshall, I am happy at having it in my power to notice two others, with the history of which I have been recently favored by my friend, Dr. C. ROGERS, of Edinburgh, in the treatment of which blood-letting was had recourse to, as in Mr. Marshall's cases, for the purpose of relieving dyspnœa, and was speedily followed by a striking alleviation of all the symptoms. These cases occurred so late as the year 1823.

This evidence in favor of the depletory mode of cure I consider strong, and the more particularly so coming from such authority as that of Dr. Rogers, who for some time practised along with Dr. Christie in the Island of Ceylon, and lately filled the situation of superintending surgeon in the northern division of the Madras settlement; a station where he had ample opportunities of seeing and treating the disease under its every form, and who not long since entertained very different views on the subject to those which he has lately been led to adopt. In allusion to blood-letting in the treatment of this disease, (as found in his Disputatio Inauguralis Medica quædam de Hydrope Asthmatico in Ceylonia, grassante Beriberia, dicto Complectence,) he makes use of the following words:—"Quin et, ad phlebotomiam tandem decursum fuit; vena autem pertusa, morbus cursum ejus funestum celerius absolvit."

CASE.

November 20th, 1820, ten A.M.—H. C., æt. thirty-two, of a rather spare habit of body, says that he has felt more or less indisposed for the last two days. Complained last night of very acute headache, with a sense of extreme debility and severe dyspnœa, (which last came on him suddenly,) of great numbness, and a disagreeable pricking pain in his thighs and legs, which were much swelled and œdematous; face and abdomen likewise considerably swelled; countenance extremely anxious; complained of feeling very cold; inclined much to vomit; pulse 120, weak and irregular; tongue furred; urine scanty and high coloured; bowels open; skin dry, and cooler than natural. Has lived for the greater part of the last twelve months on the Island of Ceylon. —Was bled to the extent of thirty ounces, which afforded much, and almost immediate, relief; had also four grains of calomel, with ten grains of jalap, given him, for the purpose of acting upon his bowels. This was, however, soon afterwards vomited; when thirty drops of Tinct. Opii were given, with a view to moderate the gastric irritability which existed, and procure sleep.

I visited him this morning at ten A.M. Says that he has passed a very restless night. All the symptoms, though not so urgent as before the bleeding, still continue, particularly the headache and dyspnœa; pulse 116, stronger and rather more regular than at last visit. Blood taken last night of a buffy appearance.

Mittantur mox pleno rivo sanguinis unciæ quinque viginti.—℞. Subm. Hydrargyri ℈j.; Tinct. Opii gtt. iij.; Pulv. Scillæ gr. j. M. statim sum.

Six P.M.—Feels better: dyspnœa and headache much relieved by the bleeding. The Calomel and Laudanum twice repeated since morning, with the addition of six grains of Gamboge to the last dose, for the purpose of acting on his bowels. Has had the fumes of the Hyd. Oxyd. Ciner. twice applied to the surface of the body, which was each time followed by a general glow of heat and free perspiration; and, soon after the first application, completely removed that coldness of the extremities, and indeed of the whole body, from which he appeared to suffer much at the time I first saw him. Œdematous swelling now almost general over the whole surface of the body; pulse ninety-six, softer, and more regular; thirst urgent. Blood taken in the morning slightly buffy.

Omittatur Tinctura Opii.—Repet^{r} Hydrarg. Submur. et Pulv. Scillæ tertia quâque horâ.—Suffit. quartâ quâque horâ.—℞. Unguent. Hyd. ℥ij.; Aq. Ammon. ʒj. M. infric. semi uncia de die.—℞. Supertart. Potassæ ℥j. Infunde in aquæ ferventis unciis quindecem per semihoram et cola. Capiat uncias tres pro re nata.

21st.—Has had several copious watery stools since yesterday evening; slept badly; dyspnœa less troublesome; headache better; œdema of extremities slightly diminished; urine still scanty and very high coloured; great apparent debility; thirst incessant; pulse ninety-eight, and pretty full; perspires freely for some time after each fumigation; countenance bloated: tongue furred. Has taken twenty grains of Calomel almost every three hours since yesterday morning; had the fumes of the Hydrargyri Oxydum Cinerium regularly applied to the surface of the body, and the Ung. Hyd. Fort. repeatedly rubbed in during the night, but as yet there is no appearance of ptyalism.

Continuentur medicamenta ut heri præscripta.

Six P.M.—Dyspnœa very much relieved; anasarcous swelling of the abdomen considerably reduced, but the œdema of the lower extremities appears very little diminished; thirst still urgent. Drinks freely of the cream of tartar and water, which keeps his bowels open. Has made upwards of two pounds of urine during the day, not so high coloured as formerly; breath affected by the mercury. Diet, light soup and sago.

Continuentur omnia.

22d.—Spits copiously; slept little during the night, but there is today a most striking alteration for the better: dyspnœa almost entirely gone; anasarcous swelling all over the body very perceptibly diminished; thirst less urgent. Has made nearly six pounds of urine since yesterday afternoon. At times perspires freely; pulse 102; tongue rather loaded; bowels loose. Says he feels much stronger than he has before done since the commencement of the attack; appetite pretty good. Diet, soup and sago.

> Omittantur omnia medicamenta.—Utatur Gargarism. ex Aq. font. et Nitrat. Potassæ.

Six P.M.—Complains chiefly of the soreness of his mouth; little or no difficulty of respiration. Quantity of urine since morning, eight pounds. Skin moist; pulse ninety, and pretty strong; no stool during the day. Had a little boiled fowl for dinner.

> ℞. Potassæ Supertart. ʒvj.; Pulv. Jalap. gr. x. M. fiat pulv. statim sumend.

23d.—Until about four A.M. rested well; since which time he has had frequent watery stools, from the cream of tartar and jalap. Saliva flowing freely; no return of dyspnœa; œdema rapidly diminishing; appetite getting keen; still complains of thirst; pulse eighty-six; urine copious; skin dry. Diet, fowl, soup, and sago.

> Cont^r Garg.—Habeat decoctum hordei pro potu ordinario.—℞. Infus. Gent. comp. ℥ij.; Liquor Ammon. Acetat. ℥ss.; Spirit. Ætheris Nit. ʒij. M. fiat haust. ter in die sumend.—Habeat ter in die Spirit Vin. Holland. unciam ex aq.

Six P.M.—Continues doing well; has had three copious liquid stools since morning. Skin dry and rough; urine, during the last ten hours, upwards of three pounds; pulse ninety-two.

> Continuentur medicamenta ut heri, et capiat hora somni.—Opii gr. iv.; Pulv. Ipecac. gr. iv.; Sub. Sulph. Hyd. Flav. gr. ij. M. fiat pil. ij.*

24th.—Slept well, and has perspired very copiously during the night, so much so that it became necessary this morning to remove the blankets which were next him. Œdema daily decreasing; countenance becoming much more natural; mouth continues sore; appetite good; pulse eighty-two.

> Continuentur Garg., Decoct. hord., Mist. Diuret., et Sp. Vin. Holland.

Six P.M.—Has had no stool for the last twenty-four hours; skin moist; pulse ninety.

> ℞. Pulv. Jalap. gr. x.; Supertart. Potassæ ʒiv. M.

25th.—Appears today much better in every respect; has had three copious liquid stools from the purgative. Œdema of the extremities entirely reduced, that of the abdomen so much so that it does not now pit on pressure. Still spits freely; urine of a more natural appearance, and begins to diminish in quantity; appetite very keen; thirst much less urgent; skin moist; pulse eighty-two. Diet as before.

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* The above prescription of the late Dr. MARRYAT is perhaps the most effectual diaphoretic that can be given, and at the same time mild in its operation.

Continuentur medicamenta.

26th.—Has had a good night. Anasarcous swelling all over the body completely gone. Says that he feels daily getting stronger, but has still considerable numbness of the lower extremities, particularly felt upon attempting to walk; mouth getting better. Has flannel bandages tightly applied from the toes up to the groin on each side, and the parts well rubbed with stimulating liniments.

Habeat bis in die Vin. Alb. ℥ij.—Continuentur alia ut heri.

27th.—Continues improving: says his appetite is now so keen that he can scarcely satiate it; general appearance good; skin moist; pulse eighty-six and strong; bowels open. Had a blister applied last night along the course of the spine, in the dorsal region, which has risen well.

Continuentur medicamenta.

28th.—Complains only of the soreness of his mouth, which is, however, getting fast well. Walked for nearly a quarter of an hour yesterday, without feeling much fatigued.

Continuentur medicamenta.

29th.—Improves in strength daily. No stool for the last twenty-four hours; skin moist; pulse natural.

℞. Pulv. Jalap. gr. vj.; Supertart. Potassæ ʒij. M. statim sumend.—Cont^r alia ut heri.

30th.—Makes little or no complaint today: mouth almost well. Has had two stools from the cream of tartar and jalap given yesterday.

Cont^r medicamenta.

December 1st.—During the last two days has wonderfully improved in appearance. Appetite continues good: pulse regular; skin moist; bowels open; tongue clean; voids about the natural quantity of urine in the twenty-four hours.

Cont^r medicamenta.

2d.—Perfectly well, except a slight numbness of the inferior extremities, which still continues.

Cont^r medicamenta.

3d.—Had a second blister applied last night, about two inches broad, along the whole course of the spine, which has risen well.

Curetur ulcus Ungt. Sabin.—Cont^r medicamenta.

4th.—Continues well in his general health.

Habeat vini libram indies.—Omittantur alia.

5th.—Discharged from the sick report, with instructions not to resume his duty until the numbness of the extremities shall have been completely removed.

This individual, in about ten days from the time that he was discharged, had perfectly recovered the use of his limbs, and was in every respect completely cured.

STOMACH AND INTESTINES.

Inquiries into the Healthy and Diseased Appearances of the Mucous Membrane of the Stomach and Intestines. By W. E. Horner, M.D. adjunct Professor of Anatomy in the University of Pennsylvania. (Condensed from the *American Journal of the Medical Sciences.*)

(Continued from page 121.)

III. *Of the Red Inflammation of Mucous Membranes.*

Red inflammation has for its symptoms heat, pain, redness, and swelling, all of which are very obvious when it attacks a portion of the external surface of the body. It differs from congestion, in the latter causing an accumulation of blood in all the capillaries of an organ in which the blood is arrested, while inflammation is most frequently limited to a single tissue, and exhibits redness in it alone, or at least principally; as, for example, in mucous coats during their inflammation, in muscular during theirs, in peritoneal during theirs, &c. This, however, must depend upon the intensity of the inflammation, for, where it is very considerable, adjacent coats will also be affected.

Congestion is regular in its progress, and begins without constitutional symptoms; whereas inflammation begins with a chill, has exacerbations and remissions, and a course of augmentation, of stasis, and of decline. They both may terminate by delitescence, or a disappearance of the accumulated blood, or by resolution when particles of red blood are infiltrated; but inflammation also terminates in suppuration, in scirrhus, in hepatization, and softening of a part.

The traces of acute inflammation are in many cases very fugitive, and entirely disappear upon death, because the local irritation, which attracted the blood and accumulated it, having ceased, the blood abandons that part and retires towards the centre of the circulation. We can seldom tell by the appearances twenty-four hours after death, the quantity of blood which has penetrated an inflamed membrane, as the peritoneum, the pleura, the cellular and mucous membranes, the skin, &c. The eruption of measles, and the redness of sorethroat, disappear on the death of the patient. We are not, however, to infer from these circumstances that the mere afflux of blood to a part constitutes inflammation: on the contrary, it is attended with a dilated condition of the vessels independent of this afflux, for, if death occur during the height of measles, the eruptions may be made to reappear by injecting the vessels.

There are many proofs of inflammation being seated in the capillary system, and of the circulation of the latter being in some measure independent of the general circulation. 1. The partial erythemas of the skin. 2. In slight incisions or scratches, the skin will bleed very little at first, but, so soon as the irritation has determined a flow of blood to the part, the hemorrhage is sometimes troublesome; as in shaving. 3. The secondary bleeding from operations is sometimes very profuse from this cause. 4. Another, and a very strong proof of the power of the capillary circulation to go on without the impulsion from the heart, is that, if a limb be made turgid with blood by the application of a tourniquet, as in common amputation, when it is cut off, though it be completely withdrawn from the influence of the heart, yet the capillaries empty themselves, and the limb becomes as pallid as under any other circumstances of death. Though I feel satisfied of the capillary circulation being different from the circulation in larger vessels in not depending wholly on the heart, yet it is to be understood that I do not withdraw it entirely from this agency, for there are many strong proofs of its subordinancy. In the inflammation of transparent parts, for example, of the skin under the finger-nail, where vascularity is very perceptible, every pulsation of the arteries of the upper extremity is attended for the moment by an increase in the vascularity of the part inflamed, and a deeper suffusion of it.

The irregularities in the capillary circulation are always partial, for if the blood move more slowly or go backwards in one place, it will proceed more speedily in another, so as to maintain the general circulation: if it were otherwise, life must cease, for it would be incompatible with it for all the capillary circulation to be arrested or to go backwards at once. Hence arises a law of organism always strongly exemplified in disease, that, if the vital forces augment their energy at one place, they diminish it in another. There appears, indeed, to be only a certain quantity allotted to each individual, and though it may be accumulated at certain points so as to present a disproportionate sum in different parts of the body, yet it never can be augmented or diminished in mass by disease. This principle is the foundation of all correct physiology and pathology, and is in fact a matter of daily observation. We learn from this why it is that general bleeding is frequently inefficient in local inflammation; for so long as local irritation continues, whereby blood is attracted (not driven) to a part, the mass of blood may be diminished one quarter, and yet the inflammation will continue: whereas, in an animal having no irritated point in his system, you may double the quantity of blood by transfusion, and yet not produce local inflammation.*

Every operation of nature manifests an economical or exact application of means to effect an object: there is nothing superfluous. We therefore see that, during the waking state, the vital energies and the currents of blood are principally directed towards the senses and organs of animal life or those of relation, as the muscles, &c.; and that, during sleep, the vital energies are applied to molecular nutrition, and the repairs and general restoration of equilibrium in the system. Infants sleep more than adults, for the reason that their molecular nutrition or growth is more imperiously required. Deprive any one of sleep, and he soon becomes haggard and emaciated. There is a continued alternation in each individual in the actions of the system and in the currents of blood, depending upon the waking and upon the sleeping states,—one set of organs requiring the blood more at one time, and another set at another. It is impossible for an undue excitation and an undue rush of blood to occur upon all points of the body at one and the same time, or, in other words, for there to be a general disease. A general disease or inflammation would be as little consistent with nature, as a general rise in the waters of the ocean, which we know to be always lowered at one place when they are raised by the wind or other causes in another. Such an inference would be a solecism in pathology, for the reason that disease implies a loss of equilibrium in the actions of the body, by one or more parts having an unnatural preponderance. The general actions of life may all be increased at the same time, as one increases the weights upon each end of a pair of scales, and yet preserves an equilibrium; but, so soon as we take from one or add to the other, the equality is destroyed.

It is, perhaps, owing to molecular nutrition being stronger at night that the symptoms of inflammation (which at least in its milder forms bears some analogy) are increased at this time.

The general augmentation or acceleration of the actions of the body in exercise, as running, jumping, and so on, differs from disease in this respect, that there is no concentration of irritability in any one organ, and a consequent afflux of blood; but, on the contrary, the equilibrium of the system is maintained, notwithstanding the apparent haste and momentum of its actions.

The causes which produce inflammation of the mucous coat of the stomach and bowels are numerous, and in many individuals there is an idiosyncrasy which inclines them to it, from very slight causes. Persons who are exposed to the changes of the atmosphere by sleeping out of doors, as in military life, present frequent examples of it: bad aliment, or an excessive indulgence in what is good, also disposes to it. Poisons of all kinds may produce it; also moral affections, as melancholy, rage, &c. As my principal object, however, is to point out the anatomical characters which are left after death by gastro-enteritis, I must confine myself to such remarks as are pertinent to them.

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* Anat. Gen. vol. ii. p. 41.

In acute inflammation of the mucous membrane of the stomach, when the patient dies in the early stage of the disease, the blood-vessels which ramify through the stomach are enlarged and distended with blood. The membrane itself is covered by a coat of mucus, which is sometimes limpid like the white of an egg, but on other occasions thick and purulent like that from the nose. The mucus adheres frequently very strongly to the stomach, and is now and then so tenacious and consistent, from the admixture of coagulating lymph with it, as to resemble a false membrane. When the coat of mucus is scraped and washed away, the mucous membrane itself is brought into view, being most frequently, in the greater part of its extent, of a deep red, approaching on some occasions a crimson red, on others a purple or black. These colours are owing to the injection of a prodigious number of capillary vessels in the mucous coat; and, in addition to them, we find the inflamed part of the stomach interspersed with bands and patches of red, of the colour of coagulated blood, being a species of ecchymosis, in which the blood has escaped beneath, and in the substance of the mucous membrane. The mucous membrane at these places is somewhat softer than natural, and sometimes appears swollen, may be readily detached from the cellular coat with the end of a scalpel, and is in the condition of a *bouillie.* In cutting through all the coats of the stomach, and looking at the incised edge, it will be seen that, where the general and diffused redness exists, the colour is only superficial; but, at the ecchymosed spots, not only the whole thickness of the mucous coat is concerned, but even the corresponding part of the muscular, is more highly coloured than in common. In some cases where the gastritis has been occasioned by caustics, there are eschars of the mucous membrane, some of which are detached and leave the muscular, or even the peritoneal coat bare, from the depth of the impression made. It is said that such which, soon after the commencement of the attack, became œdematous, as did also the face, and indeed the greater part of the body; with a general sensation of coldness over its surface; pulse 120, small, feeble, and intermitting. All these symptoms went on increasing until the death of the patient, which took place within forty-eight hours from the time he was first attacked. A short time previously to his death, he was seized with a violent fit of vomiting, spasms of the abdominal muscles, and increased dyspnœa, which carried him off.

Though the plan of treatment recommended by Dr. Christie had in the first case proved unsuccessful, such was my confidence in that author, from the very decided manner in which he speaks of his success, that I was a second time induced to follow his footsteps in the treatment of this complaint; but, I am sorry to say, as unsuccessfully as before. I now determined to examine the body, and, if possible, discover some indication or other by which I might be guided in my future treatment of the complaint, should a case of the kind again occur to me. I shall here state the particulars of this examination, together with the mode of treatment I was afterwards led to adopt, by which I succeeded in completely curing my next three patients; in two of whom the symptoms were, in the first instance, still more alarming than in either of the cases which terminated fatally. Leaving the country soon afterwards, I was deprived of an opportunity of giving it a more extensive trial.

I carefully examined the contents of the cranium, thorax, and abdomen. Upon removing the skull-cap, I found upwards of an ounce of serum effused between the dura mater and tunica arachnoidea; and in two or three different places there appeared dark red-coloured patches, one of which was exceedingly vascular, and extended into the substance of the brain, to the depth of from a quarter to half an inch. There was likewise found considerable effusion in all of the ventricles except the fifth, or that cavity formed by the separation of the laminæ of the septum lucidum. In the base of the cranium, upon the brain being removed, there appeared upwards of four ounces of fluid tinged with blood. The lungs were very much loaded with dark-coloured blood; and in both cavities of the thorax there was found extensive effusion. The heart was of a pretty healthy appearance; nor did the pericardium seem to contain a much greater quantity of fluid than that generally found in it; both on its external surface, however, and likewise internally, there existed very evident marks of inflammation.

The diaphragm, particularly towards the right side, appeared considerably inflamed. The stomach was of a healthy appearance, and contained about six ounces of a dark brown-coloured liquid. The liver was very evidently larger than natural, and appeared even still more loaded than the lungs: on cutting through its substance, the blood, from different points, trickled out almost in a continued stream; and indeed all, even the most minute, vessels seemed completely gorged; as were likewise those of the mesentery and pancreas. In several places on the surface of the intestines there appeared a sort of efflorescence, but, upon the whole, they presented nothing very remarkable. From three to four pounds of fluid were found in the cavity of the abdomen; and in the cellular texture, almost all over the body, there existed very extensive effusion. On examining the spinal marrow, there was found to exist the same evident marks of congestion as in the liver, lungs, &c. almost along the whole of its course, though that more particularly in the dorsal region. No other deviation from the natural healthy appearance of the parts was found to exist.

Dr. Christie mentions, that in many of the subjects he examined who had fallen victims to this disease, there was a remarkable obesity, even after a long continuance of it, and the use of mercury, antimony, and other powerful medicines. This I found to be the case in the individual whose body I examined; but he was naturally of a full habit of body, and in him the disease had not existed long.

Having fully satisfied myself, from the post-mortem appearances, that the dropsical affection and other symptoms in the case of the individual whose body I had an opportunity of examining, (and I have little doubt in every other where the disease occurs,) arose from obstructed circulation, in consequence of congestion in the internal organs; and that beriberi consequently could not be considered a mere disease of debility as described by the celebrated Bontius, and more recently by Dr. Christie, Mr. Hunter, Mr. Colhoun, and others, but a disease in the treatment of which depletion might be had recourse to with the greatest possible advantage, I fully determined, should an opportunity again present itself, (regardless of the apparent debility of the patient on the one hand, or of the doctrines of the humoral pathology on the other,) to try the effects of blood-letting, for the purpose of assisting other means in exciting reaction, determining towards the surface, and restoring the balance of circulation. For this end, in the following case, thirty ounces of blood were, upon my first seeing the patient, taken from the taken, in the post-mortem examinations at the Alms-house, for congestion, from an arrest of blood in the agonies of dissolution.

The red blotches which form the leading anatomical character of acute mucous inflammation in malignant fevers, may be readily produced by chemical irritants.

Experiment 6th.—A full-grown white rabbit, fed three hours before on cabbage-leaf, was fixed in a frame, and the abdomen opened by a cut from the sternum to the pubes. The stomach was drawn out: it was filled with the food, which exhibited the appearance of having been boiled, and had an hour-glass contraction in its middle, separating it into two sacs, with a small orifice between them. The stomach was opened all along its greater curvature, and the food turned out: the whole mucous coat was of a scarlet-lake colour. This colour became deep crimson-lake, and the stomach more suffused with blood on wiping or rubbing the mucous coat with the hand. To one part I applied the glass stopper of a bottle, wet with a saturated solution of corrosive sublimate in Sp. Vin. rect., which had the effect, in three or four minutes, of deepening the colour of that part still more.

The colon was in greater part filled with soft fæces. The small intestines, on being cut into, exhibited the mucous coat of a light-lake, approaching vermilion, which colour remained after death.

In this experiment, an ounce and a half of blood was lost from the cut vessels. I had proceeded to open the trachea, and had fixed a pipe into it for the purpose of trying the effect upon the blood of shutting off the air from the lungs, when the animal died after a faint struggle.

In five minutes after, the stomach was cut out, and put under a stream of water to wash it well. The lake colour still remained in the whole mucous coat, from the residence of red blood in the capillary system. At the place where the corrosive sublimate was applied, there were irregular, oblong, red blotches of two or three lines broad. The mucous coat had, indeed, this variety of hue in other places also, but not so deep. In one part there was a line of petechial spots, half an inch or three-quarters in length, from half a line to a line in diameter, each resembling in colour the red blotches.

Observation 4th.—Acute Gastritis and Peritonitis.—Harriet Derrickson, an African, aged twenty-six years, was received near the term of pregnancy into the Alms-house, July 13th, 1827, after a recent confinement in prison. On the preceding day she had got wet, which produced a pain in the right hypochondrium: she was relieved by immediate bleeding.

July 13th.—Her pulse was rapid and febrile, and skin rather above natural heat, but the symptoms were generally mild, and not alarming. She was ordered a dose of Epsom salts, and barley water for common drink.

14th.—Eye slightly sallow; tongue inclined to dryness, with dark fur at base; costiveness; skin of common temperature, and moist; pulse rather tense and rapid. In the afternoon, there was a violent pain over the whole head, which was rendered still more severe upon her stooping. Vertigo, thirst, loss of appetite, pains in the limbs. A dose of Seidlitz powders, and cold applications to her head were prescribed.

15th.—Tongue unchanged; thirsty still; skin hot; violent pain in the right side; eyes yellow; breathing hurried; pulse rapid, not strong. Treatment continued, with the addition of cups to the right hypochondrium.

16th.—She miscarried of a dead child today at six A.M. with the loss of but very little blood, but her strength was almost exhausted. Her skin continued hot and dry, her tongue dry; stupidity. The symptoms continued to increase during the day.—Twenty leeches were applied to the temples, and forty to the epigastrium.

At four P.M. a saline mixture, which she had taken in the morning, brought away some natural evacuations; but the skin continued excessively hot; the pulse rapid, without tension, and compressible; the tongue still furred with red apex and edges. The sense of pain in the head had diminished much, but there was great tenderness of the epigastric and hypochondriac regions.—A blister was applied to her side, sinapisms to her ankles, and fifteen drops of spirit of turpentine were directed every hour.

17th.—Almost entire insensibility; eyes of a golden colour; pulse very feeble; soreness of flesh; restlessness and moaning.—Spirit of turpentine increased in the afternoon to ʒij. every hour.—She died at six and a half P.M.

This case was not treated by myself: the notes of it, so far, were communicated by a most zealous and intelligent student of the house, Dr. Ashmead.

Autopsy, eighteen hours after death, by Drs. Hodge, Ashmead, and myself.—We found the internal face of the uterus lined with red blood, which had blended with its ragged surface; clots of blood were in the uterine orifices of the uterine veins, and could be readily picked out. There had been no undue hemorrhage or lochial discharge.

The capillaries of the peritoneum, especially at the lower part of the abdomen, were distended with blood, and produced here and there rose-coloured patches. The peritoneal covering of the uterus seemed to have exceeded other parts in the intenseness of its disease, and had beneath it several patches of from six to twelve lines each of ecchymosed blood.

The stomach presented a degree of inflammation over its whole mucous coat, not often surpassed even in yellow fever. Some inches square of its middle were almost in a state of sphacelation, from the congestion and extravasation of red blood. Small clots of black blood were found among the contents of the stomach, but there was no black vomit.

The following case will serve to illustrate the appearance of the mucous membrane of the stomach, after an inflammation of two or three weeks.

Observation 5th.—Chronic Gastritis.—Women's Surgical Ward, Alms-house. Mary M'Graw, aged twenty-eight, moderately corpulent, common stature, lymphatic temperament, habits of intemperance, was admitted May 10th, 1827, for a fracture of the neck of the acromion scapulæ, destruction of the acromio-clavicular articulation, and an extensive laceration and injury to the shoulder joint, manifested by the extreme facility with which it could be thrown out of place and restored again. The account she gave was, that two years ago she fell into a ditch, upon which occasion she produced the injury mentioned, and also broke the os humeri about the lower end of the bicipital groove. The os humeri was cured of its fracture by the attention of a surgeon, but the shoulder remained in the state described. She afterwards continued to do her ordinary work till last January, when she began to suffer violent pain in the affected shoulder, and subsequently lost the use of her arm.

Without very sanguine hopes of the success of the treatment, I yet determined, as there was not much probability of the individual being made more helpless by the operation, to try the effects of a seton in producing a reunion of the broken acromion and of the acromio-clavicular articulation. The patient agreed to the proposal, and May 29th was fixed for its execution, but, owing to her being feverish and unwell on that day, it was postponed to the next prescribing day.

June 1st.—The patient seeming sufficiently well, I passed a seton through the acromio-clavicular articulation, and another through the fractured neck of the acromion. The patient, being exposed in returning through the yard to her ward, was seized directly afterwards with a chill, which lasted half an hour, and was succeeded by fever. (Of which she died, on the 21st.)

Autopsy.—Abdomen: The peritoneal surface of this cavity and of its viscera, universally of a clear white pearl colour, and destitute of adhesions.

Stomach: Moderately distended with flatus, and contained the last articles of medicine and of nourishment. Its mucous coat, for the most part, of a white colour, and destitute of injected vessels; yet in the cardiac half, particularly the cul de sac, many of the large veins were occupied with blood, and led to blotches of blood now almost removed, but which were yet sufficiently obvious when the part was held between the eye and a window; mucous coat in left half so softened that it could be readily scraped away with the finger.

Intestines healthy, light-coloured, and diaphanous, excepting the duodenum, the internal coat of which was much injected, hardened, thickened, and with much less appearance of valvulæ conniventes than usual.

Liver of a brownish yellow colour, as in intemperate persons, somewhat indurated, and had on its upper surface a hydatid the size of a nutmeg.

This case, in which there was unequivocally marked gastric irritation, proves that when an acute inflammation of the stomach had persisted for some days, though it terminates in death, no very great redness of the internal membrane may be manifest, and consequently that it is impossible to estimate the state of irritation of an organ during life solely by the quantity of blood left in it after death. Dying seems to have the effect of concentrating more and more towards the heart the vital powers and the fluids, or, in other words, withdrawing them from the circumference to the centre; in the same way that a prudent general, on finding his outposts too much extended for the size of his army, will contract them more and more, as his force diminishes by battle and disease.

[To be continued.]

HOSPITAL REPORTS,

(PRINCIPALLY CONDENSED FROM THE VARIOUS PUBLICATIONS.)

INJURIES OF THE HEAD.

Case I. *Exfoliation of a Portion of the Temporal Bone, from a Blow.*

J. Cleaver, æt. eighteen, fell from a scaffolding on the 24th of September: the scalp covering the left parietal bone was torn, and the pericranium partially detached. The integuments were replaced, and some degree of adhesion took place. In the course of the following month, he had two attacks of erysipelas of the scalp, during which he took salines with tartarised antimony, and occasional doses of calomel.

On the 25th of October, he noticed that his right hand was unusually weak. On the afternoon of the 28th, he had an epileptic fit, which lasted five minutes. For the three following days, the weakness of the hand increased; he could move his wrist and fingers, but could not support a moderate weight. The portion of bone which had been originally denuded was found to be exfoliating, a groove having been formed round it by absorption. It appeared likely that at one part or other the exfoliation might occupy the whole thickness of the bone, and that matter had formed upon the dura mater. From this period he gradually recovered the use of his hand. The portion of bone was so loose on the 3d of December as to admit of being removed with the dressings: at the edge it was of the thickness of the outer table only; centrally, for the length and breadth of half an inch, it consisted of the entire substance of the bone. The dura mater and the surface of the living bone were covered with healthy granulations.

The boy soon afterwards recovered entirely; he was treated at the MIDDLESEX HOSPITAL.

CASE II. *Hernia Cerebri.*

Samuel Makeller, six years of age, was kicked upon the temple on the 21st of September: he was stunned by the blow, but, by the time he was brought to the Middlesex Hospital, he had perfectly recovered. The integuments were wounded, and there was fracture with depression, extending across the coronal suture from the parietal to the frontal bone on the right side. The fracture was about three inches in length, the depression of the depth of two lines. The edges of the wound were brought towards each other with adhesive plaster: he was placed upon low diet, and the bowels acted on by aperients, containing calomel, every other night.

For several days he remained perfectly well, but on the 4th of October he became indisposed: he had shivering, and vomited several times; the bowels were confined, and acted upon by medicine with difficulty. The pulse, which had hitherto been 120, fell to sixty, and became extremely irregular, intermitting every third, fourth, or fifth beat. Leeches were applied to the head, and mercurial purgatives were prescribed. The pulse rose, and, though the tongue and skin continued dry, his general appearance was improved. Antimonial salines were administered.

On the 13th, his skin was cool, his tongue moist, his appetite had returned, but his nights were disturbed and restless.

On the 15th, about one o'clock, having had a rigor, he became insensible: the breathing was stertorous, the pulse fell to sixty again, but was regular; the pupil of the right eye was dilated; the right side of the face was convulsed, as well as the left arm and hand. The trephine was applied, so as to allow of the elevation of the depressed portion of bone, which, being found to be detached, was removed. About five ounces of pus escaped from the cranial cavity during and after this operation, that had lodged between the cranium and the brain; the dura mater was in a sloughy state. The child immediately showed signs of returning consciousness: the pupils of both eyes acted perfectly on the admission of light; the pulse rose to 100. Towards evening, he recognised his father and mother.

On the following day, the interval between the bone and the surface of the brain was filled up by a greenish black substance, which rose above the level of the integuments: moderate pressure was made upon it by means of a roller, but the hernia cerebri continued to increase.

On the 19th, a ligature was tied round the base of the tumor, which was then removed with the knife.

By the 27th, the hernia cerebri had again become as large as a walnut, and, though it was again removed, it continued to be reproduced each time till November 1st, when he died.

On opening the head, the arachnoid membrane upon the affected side was found to have become thickened and opaque, and about three ounces of pus were contained between it and the dura mater.

CASE III. *Concussion, followed by Extravasation.*

William Beacon, æt. thirty, was admitted under the care of Mr. EARLE, at ST. BARTHOLOMEW'S HOSPITAL, on the morning of the 23d of January, labouring under the following symptoms:—Drowsiness, from which he was with difficulty roused; answered questions incoherently; pupils dilated, but obedient to the stimulus of light; pulse small and irregular; extremities cold. There was a lacerated wound of the scalp on the upper and lateral part of the left parietal bone, but the cranium did not appear to be denuded of its periosteum. He was unable to give any account of himself, but the persons who brought him to the hospital stated that he had been thrown out of a cart the night before; he was taken up insensible, and conveyed to a surgeon, who bled him. He soon after recovered his sensibility, and had vomited frequently: this amendment, however, was but temporary, for he soon fell into a state of stupor.

He was ordered Hydr. Submur. gr ij ; P. Jalapæ gr. x. quartis horis.

At four P.M., reaction having taken place, he was bled to sixteen ounces. At seven P.M. his countenance flushed, his skin hot and dry, with general restlessness and anxiety; pulse 100, full and hard. He was bled to twenty ounces, which produced complete syncope. The head, which had been previously shaved, was kept constantly wet with cold applications. Immediately after the abstraction of blood, the pulse became much softer, and was reduced in frequency; the pupils were less dilated, but acted rather sluggishly.

At twelve P.M. his pulse had increased in hardness, but was not more frequent; he was continually muttering to himself, and appeared very restless.

V.S. ad ℥xvj—Cont^{r} Hyd. Subm. cum Jalapa quartis horis.

On the 24th, he was violently delirious, and was again bled to sixteen ounces.

25th.—Last evening he was so restless that he could with difficulty be kept in bed; pulse frequent and irregular; the muscles of the left side of the face were now first observed to be drawn to one side. He passed his urine and fæces involuntarily.

C. C. ad ℥xvj. temporib.—Applic^{r} Emp. Lyttæ. mag. nuchæ statim.

26th.—More decided symptoms of compression have manifested themselves: the right side of the body is partially paralysed, and there is almost a continued convulsive twitching of the muscles of the face and upper extremity of this side, with impaired sensation. His breathing is not affected, but he is more comatose, and quite inattentive to any one around him. Continues to pass his urine and fæces involuntarily. Upon examining the wound of the scalp, it had not united, and was in a sloughy state; the bone beneath was quite bare to the extent of about an inch, and to all appearance dead; it was quite white, and did not bleed on being scraped.

Mr. Earle considered this one of those perplexing cases which are sometimes met with, where concussion and extravasation are coexistent. In the earlier part of the case, the patient had laboured under the symptoms common to concussion, while latterly those of compression had gradually come on. Considering the active means which had been adopted without any amelioration of symptoms, Mr. Earle conceived it a fit case for the application of the trephine to that portion of bone which appeared to be dead. No blood escaped until the instrument had penetrated the diploe, when about two or three ounces of blood oozed out: the portion of bone was elevated and removed, and the dura mater carefully examined. No blood or matter was found upon its surface, but it had a bluish tint as if blood had been deposited beneath; in other respects it appeared perfectly healthy. The wound bled freely, from one of the branches of the meningeal artery having been opened: a pledget of wet lint was put over it, and the patient conveyed to bed. At nine P.M. his pulse being hard and full, he was bled to twelve ounces.

28th.—He appeared rather more sensible during the early part of yesterday, but gradually sunk, and died last night.

Sectio cadaveris.—Blood was found effused underneath the fascia of the left temporal muscle; the dura mater was sound, and free from inflammation. Upon removing this membrane, there was found to be effusion of blood over the whole surface of the cerebrum. On the left hemisphere, exactly opposite where the bone had been removed, a considerable quantity of dark clotted blood was deposited; the hemisphere was much flattened from the pressure. The cellular tissue connecting the vessels of the pia mater was also greatly injected. A fracture was discovered, extending from the upper part of the squamous portion of the left temporal bone, through the superior inferior angle of the left parietal; it extended across the groove of the arteria meningea media. A great quantity of blood had been thrown out between the dura mater and bone, amounting to not less than three or four ounces. The posterior surface of the middle lobe of the hemisphere of this side was coated with a layer of dark grumous blood. Upon making a section of this lobe, its anterior and middle part had undergone that change of structure termed "ramollissement:" it was reduced to a soft cream-like consistence to the extent of about two inches, evidently commencing in that part of the lobe corresponding to the fracture.

CASE IV.—*Fracture with Depression, successfully treated without Operation.*

Robert Cockman, æt. thirteen, was admitted at five P.M. Dec. 12th, under the care of Mr. BRODIE, at ST. GEORGE'S HOSPITAL, having fallen upwards of twenty feet half an hour previously.

The skin was pale, the pulse ninety-six and feeble. He was perfectly sensible, but had total loss of memory, not even remembering his own name; and upon examination there was found, near the temporal ridge of the left parietal bone, a good deal of extravasation of blood beneath the scalp, and what appeared to be a considerable depression of the cranium.

He had a spirit lotion applied to the head, and was purged.

13th.—Vomited two or three times in the course of last evening, and this morning the pulse has got up to 110, with hot skin, dry tongue, and headache. The bowels have been freely opened.

He was bled to eight ounces, with the effect of relieving the pain in the head; and was ordered salines with antimony every six hours.

From this time no bad symptoms whatever remained. As the extravasated blood was absorbed, the depression of the bone became marked, and no longer bore any resemblance to those cases of pitting in the scalp caused by effusion around the stricken part. The edges were bold and distinct, the depression, we should say, nearly a quarter of an inch in depth, and over it there was an evident fluctuation, but no tumor, the fluid just filling up the hollow. On the 26th, he was made an out-patient.

Sir ASTLEY COOPER, it is well known, has drawn a distinction between simple and compound fracture of the skull, and upon this distinction he has hinged a very material difference of treatment. Mr. BRODIE is not inclined to agree with Sir Astley upon this point: first, because he thinks the analogy between fractures of the cranium and fractures of the long bones scarcely a fair one; and, secondly, because the results of his experience have not borne out the distinction.

CASE V. *Fracture of the Skull; Malformation of the Brain.*

W. Menzie, æt. seventeen, of weak understanding, and unable, from his infancy, to hold up his head without difficulty, received a blow, about two years ago, on the back of the neck, for which he was for some time a patient at Guy's Hospital. He was brought into ST. THOMAS'S on the 30th of November, having fallen from a window three stories high an hour previously. He was then totally insensible, his skin cold, his face pale, his respiration hurried and laborious; the pupils were contracted, the pulse scarcely perceptible. He had vomited once since the accident. The whole occiput was much bruised and swollen, and, the scalp having been shaved, it seemed as if the posterior superior angle of the right parietal bone was slightly depressed, but there was no other appearance of fracture.

Mr. TRAVERS ordered small quantities of brandy to be administered at short intervals; an enema, containing half an ounce of Ol. Terebinth. to be thrown up; and heated cloths to be applied to the surface of the body.

December 1st.—He has been very restless during the night. Reaction took place yesterday evening, when the brandy was discontinued. The face is flushed, and the skin warmer, but respiration is still very laborious; the pupil contracts and dilates slowly and alternately, apparently uninfluenced by light. The pulse in the left arm is sixty, regular; in the right, it is scarcely perceptible. Pressure on the scalp causes considerable pain. The left arm is motionless, but sensible; the right the reverse. He made an attempt to speak this morning on hearing his mother's voice, but seemed unable to articulate.

Twelve leeches were ordered to be applied to the head, and afterwards a poultice.

3d.—Being still comatose, Mr. Travers made an incision through the scalp, parallel to the sagittal suture, half an inch on the right side of it, and passing posteriorly an inch beyond the lambdoidal suture. The cellular substance beneath the scalp was found infiltrated with blood. The pericranium was closely adherent to the bone, in which no fissure was discernible, and the operation was discontinued. The patient seemed to be somewhat roused by the pain of the incision, and attempted to raise his hand to his head, but soon relapsed into his former condition.

He lingered two days longer, and died at nine in the evening of the 6th of December.

On removing the scalp, the pericranium was found to be thickened in its whole extent from blood effused into its texture; and, when this was separated from the skull, two fissures were perceived commencing from the same point near the centre of the left parietal bone, the one running obliquely across the os frontis, and terminating in its right external orbital process; the other following the coronal suture, quitting it only for the space of about three lines, and terminating at the squamous suture. There was no depression of bone except at the angle made by the two fissures, where a small portion of the inner table was slightly depressed. The dura mater was uninjured and adherent to the bone, except in the direction of the fissures, where its surface was covered by two or three small coagula. In the same situation, beneath the pia mater, was a more considerable effusion of blood; and, at the edge of the left hemisphere, blood was effused into the cortical substance of the brain, to a small extent. On separating the hemispheres, a large semi-transparent cyst was seen occupying the situation of the corpus callosum, which, together with the fornix, seemed to be wanting, the third ventricle being covered by a thin transparent membrane. This cyst, which was two inches in length, and one in breadth, contained about an ounce of limpid serum, and had numerous small vessels ramifying on its internal surface; it was found to be attached to the left hemisphere immediately above the lateral ventricle, the roof of which it partly formed. This ventricle was greatly enlarged and distended, and contained about four ounces of serum. On taking out the brain, a large coagulum was found on the inferior surface of the right middle lobe, which had a considerable quantity of blood effused into its substance, and was much softer than natural.

The right lateral ventricle was found to be equally distended with the left, the corpus callosum entirely wanting; the fornix was entirely deficient on the left side, and all but its anterior pillar on the right. There was a small hydatid upon the corpora quadrigemina.

ERYSIPELAS.

CASE I. *Erysipelas, and Injury of the Head, successfully treated by copious Bleeding.*

ANT. HITCHCOCK, æt. thirty-eight, a soldier, was admitted into ST. GEORGE'S HOSPITAL, November 24th, 1827, with a lacerated wound on the left side of the forehead, which exposed the bone.

He states that four days ago he fell from the top of a coach, was taken up insensible, and conveyed to some hospital, where he remained until the next day; when, having recovered his senses, he left the hospital and went to a public-house; but suffered so excessively from pain in his side and head, that at the end of a couple of days he was brought to St. George's. On admission, there was much pain in the head, with frequent nausea; eyes suffused and heavy, tongue furred, pulse strong and labouring. The bowels had not been opened since the accident, nor had the wound been dressed for three days.

V.S. ad ℥xx.—Cal. gr. ij.; P. Jal. gr. vj. quartis horis.

25th.—The bowels have been opened several times. He passed a quiet night, and the pain of head is relieved; tongue furred; pulse fuller; thirst. The wounds on the head are suppurating and sloughy.

Cat. Lini cap.—V.S. ad ℥x.—Cont^{r} Cal. &c.—H. Sal. cum Mag. Sulph. ℥ss. sextis horis.

26th.—Much pain in the head, as well as under the left nipple, where, on examination, it was discovered that one of the ribs was broken. A blush of redness has appeared upon the forehead.

Lotio Spirit. fronti.—Bandage to the chest.—V.S. ad ℥xv.

The erysipelas extended over the forehead, accompanied with pain of head, thirst, furred tongue, and quick hard pulse. He was again bled to twenty ounces; and, on the 28th, the report states that the erysipelas had extended over the right cheek, with much tumefaction of the eyelid. He was dozing and muttering all

This case, taken along with others of a similar description, shows that the objection to the practice of making free incisions, on the score of danger from hemorrhage, is by no means imaginary. It may, indeed, be said that the fatal result arose from an accidental circumstance, which might have been obviated; but undoubtedly it must always be a very formidable objection to any method of treatment, that it renders the safety of the patient so immediately dependent on the care of the nurse or other unprofessional attendants.

CASE IV. *Erysipelas, treated first with Leeches, and afterwards with Stimulants.*

Edward Jackson, a smith, forty years of age, of a bilious complexion, on the 27th of November struck the left hand with a heavy hammer, and lacerated the first phalanx of the middle finger. He went on working till considerable pain and swelling supervened. He applied, on the 29th November, as an out-patient at ST. THOMAS'S HOSPITAL, and was ordered six leeches and a linseed-meal poultice to the fingers. On the 30th November, the swelling extended over the forearm, without any redness of the skin, and he began to complain of chilliness, pain in his bowels, and sickness. He was ordered a dozen leeches to the arm, and to continue the poultice. Notwithstanding the relief which he felt from the leeches, swelling, with considerable redness, appeared on the following day, extending over the forearm, and accompanied with fever.

On the 3d of December, the inflammation had spread over the whole arm, and large vesicles had formed at the back of it. The leeches were repeated.

He was taken into the hospital on the 6th December, under the care of Mr. TRAVERS: twenty-four leeches had been applied the preceding evening. The wound of the middle finger was then in a state of unhealthy suppuration, the hand and arm were not much swelled, and the skin, from the wrist to the shoulder, was of a dark red, deepest about the inside and middle of the arm, and yielding to pressure. There was no hardness, tension, or tenderness to the touch in the affected part, which, after the swelling had been reduced by the leeches, felt quite easy. The patient looked very pale, and complained of want of appetite and rest; his tongue was white; his pulse seventy, very low and compressible.

He was ordered small doses of Calomel, Tartarised Antimony, and Opium, every six hours; with neutral salts in the morning.

December 6th.—The redness of the arm, about the elbow, is less; but it is deeper on the shoulder, where the patient complains of darting pain. Delirious during the night; tongue white, no appetite; pulse seventy, very low.

Ordered Ammon. Carb. gr. v.; Infus. Cascar. ʒx.; Tinct. Humuli ʒss.; Syrup. Aurant. ℥ss. to be taken every three hours.—Repet^{r} Pil. horâ somni.

8th.—The erysipelas extends over almost the whole back, causing the patient great uneasiness when he lies down. A good night; no appetite; bowels open.

He was ordered four ounces of port-wine daily.

13th.—The erysipelas has extended over the whole of the right hip and buttock. The cuticle is peeling off the back. The wound of the finger is in a state of healthy suppuration.

The cold lotion was discontinued yesterday.

15th.—The erysipelas has not spread any farther, and the cuticle begins to peel off the buttock. Convalescent.

On the above case the reporter makes the following remarks:—We will venture to say, that, if no leeches had been employed, and if, instead of cold applications, warm cloths had been applied to the part, and due attention paid to the state of the bowels in the first instance, the local inflammation would have terminated at the place which it first attacked, without spreading farther. The local inflammation in idiopathic erysipelas is a very harmless disease, as long as it only affects the skin, always terminating in resolution, and not requiring any active local treatment, which can have no other effect than that of repelling the disease to a part where it may prove more injurious. The whole treatment ought to depend on the general state of the health, and be chiefly directed to the deranged state of the bowels.

The question whether erysipelas ought to be treated by incisions or by bark, can only have arisen from the confounding two very different diseases.

The idiopathic certainly never requires incisions, however advantageous they may be in the phlegmonous; and bark has certainly no specific influence over the local complaint, though the constitutional symptoms may require the exhibition of tonics in either species.

MALIGNANT TUMORS.

Cases of Malignant Tumor affecting different Organs.

CASE I. *Carcinoma of the Cæcum in a Boy.*

GEORGE WILMOT, aged nine years, of a strumous habit, and much emaciated, was admitted into ST. GEORGE'S HOSPITAL, under the care of Dr. CHAMBERS, on the 28th of November, with dropsy of the legs, thighs, and abdomen. Besides the fluid in the belly, several hard immovable tumors were felt, occupying the hypogastric and umbilical regions, and extending upwards into the right hypochondrium. These tumors formed an immovable mass, of an irregular surface, and seemed for the most part attached to the right side of the spine.

The previous history of this case was, that, three years before his admission, he had suffered from an attack of continued fever; after which he remained for a long time very weak and low; that two years ago the belly became distended, and the hard tumors were then first perceived; his legs had swelled only three months before his admission.

He was now placed on a light farinaceous diet, and ordered to take three grains of Calomel every night, a purgative every other morning, and diuretic draughts each day.

Under this treatment the dropsical swellings were nearly removed in the course of ten days. The motions became of a better colour, and the urine ceased to deposit any sediment; but no alteration was observable in the hard tumors, and the tenderness of the parietes of the right side of the abdomen was still distressing. There was, however, neither tension nor fever, but excessive debility.

The Calomel was now discontinued, and half a drachm of Linimentum Hydrargyri was ordered to be rubbed in over the abdomen every night; his bowels were kept open by ordinary means; his pain was alleviated by opiates; and other indications, as they arose, were met by the usual treatment, which it is not necessary to describe at length.

He died on the 19th of December, and the next day his body was examined.

There were no traces of inflammation of the peritoneum. A large, irregularly shaped, whitish mass was observed occupying the hypogastric, right iliac, and umbilical regions, and extending up to the inferior surface of the liver. On cutting into the tumor, it was found that the interior of the cæcum and ascending colon, of which parts it consisted, was throughout in a state of foul ulceration; whilst the tunics of the intestine, as far as they could be made out in the midst of so much disorganization, were enormously thickened and hardened: the thickened and indurated parts had the character of true scirrhus, and the ulcerated surface was studded with processes of malignant growth, and had the common aspect of open cancer. The canal of the intestine was not obstructed, and the diseased surface was smeared with healthy feculent matter. Most of the absorbent glands in the neighbourhood of the tumor were enlarged and indurated, and some of them were in a state of unhealthy suppuration. In many other parts of the intestinal canal, particularly of the ileum, a growth of a scirrhous character was observed amongst the coats of the bowel. Some of the glands in the mesentery were enlarged. There appeared also in the cortical part of each kidney the commencement of a disease similar to that observed in the bowels.

Dr. Chambers remarks, that there are few, if any, instances on record of true cancer occurring at so early an age as that of the patient whose case we have just related,—namely, nine years. It is true that what was called cancer by the older writers is by no means a rare disease in infants and very young children; but modern pathologists well know that this latter affection is a fungoid disease, of a species altogether different from true carcinoma, which is now justly considered a disorder, for the most part, of advanced, or at any rate of adult, age. Some light may, perhaps, be thrown on the early occurrence of cancer in this boy by a reference to the history of his case. It appeared that his first complaint was a continued fever, which occurred three years ago, from the effects of which he never entirely recovered, and to which, in fact, his friends attributed his abdominal disease. Now, when it is recollected that almost all the fevers which prevailed in this district three years ago were attended with considerable inflammation of the mucous membrane lining the cæcum, as well as the ileum, and many of them with ulceration of this part, it will seem probable that the irritative effect of this morbid process may have contributed materially towards the development of the malignant disease (to which he may have had a constitutional predisposition,) at a much earlier period of life than if such an exciting cause had not been present. And, after it was produced in one part, that a similar malignant action should have exhibited itself in other organs, such as the kidneys, not immediately connected with its original seat, will excite no surprise in the minds of those acquainted with the progress of such affections.

It might have been supposed at first sight, from the boy's age, strumous complexion, emaciated habit, and tumid belly, that his disease was marasmus or mesenteric tabes (as it has been called). But some of its features at once distinguished it from that affection.

In ordinary obstruction and disease of the mesenteric absorbent vessels and glands in children, the swelling of the belly is a hard, tense, uniform, elastic enlargement, in which fluctuation is scarcely ever to be felt, or is, at any rate, from the scantiness of the fluid effused, when effused at all, exceedingly obscure and doubtful; the legs and thighs also are scarcely ever swelled. The very character of the swelling, besides, prevents the practitioner, in such cases, from feeling the enlarged mesenteric glands. There is, moreover, in mesenteric tabes no tenderness on pressure, and very little pain.

On the contrary, in this case, there was an abundance of fluid fluctuating freely in the abdomen; the cellular tissue of the legs and thighs was also much charged with serum. The shape and size of the circumscribed tumor within the abdomen could be felt, even before the quantity of the accumulated serum had been diminished by medicine, and afterwards its extent and dimensions were clearly ascertained; and, lastly, there was no tension, except that which depended on the dropsical effusion, and which disappeared with its subsidence; and no rigidity of the parietes of the abdomen, although there was very considerable tenderness on pressure, even to the last, but without fever, or any proper inflammatory symptoms.

CASE II. *Carcinoma of the Stomach.*

Alexander Forbes, aged forty-eight, machine maker, admitted into St. George's Hospital, under Dr. CHAMBERS, on the 28th of November: complains of tormina, tenesmus, and the frequent discharge of small liquid motions mixed with blood, and says he has no proper feculent evacuations. His abdomen, which is not tense, is very tender, particularly in the region of the ascending and transverse colon. No sickness or nausea.

Pulse 100, small; skin warm; tongue white, moist; urine not passed freely, but natural in appearance; no appetite; he is much emaciated.

He says he has been ill only three weeks with the present symptoms, which are daily increasing in violence, but he has taken no medicines. He attributes his complaints to cold.

Hydrarg. Submur. gr. iij.; Opii puri gr. ss. ter die.—Milk diet.

Under this treatment, to which were afterwards added twenty-five drops of laudanum, an opiate injection every night, and mustard poultices to the abdomen, he became daily more comfortable as to his bowels, but his debility and emaciation evidently increased rapidly; the tenderness of the abdomen was distressing to the last, but no tumor or hardness was felt in any part of the belly. It may be remarked, however, that he would not allow sufficient pressure to be made on the abdomen for a satisfactory examination with reference to this point. His mouth was not made sore by the mercury. Latterly he could take no nourishment except small quantities of arrow-root and jelly, with wine or brandy; and he died on the 11th of December.

Sectio cadaveris, December 12th.—The stomach had an opaque white appearance externally, which was not natural. Within it a large ulcer, of the true carcinomatous character, occupied more than half the internal superficies of the organ. It extended from the cardiac close to the opening of the œsophagus, along the lesser arch of the stomach to the pylorus, two-thirds of the annular edge of which aperture were involved in the ulceration, the anterior third part only of the ring being healthy. The anterior and upper portion of the stomach was free from disease internally, except that the villous coat was somewhat thicker than natural. The pyloric extremity of the pancreas was enlarged and indurated, and the induration had the character of scirrhus. There was no disease of the absorbent glands in the neighbourhood of the stomach and pancreas. The mucous lining of the ascending and transverse colon exhibited traces of small superficial ulcers which had evidently healed some time; the mucous membrane of the bowels throughout was paler and thicker than natural.

The liver was large and firm, but of a healthy colour, and not diseased in structure.

There was no disease in the chest.

The above case, which is very like those which formed the subject of discussion at a recent meeting of the Medical and Chirurgical Society, exhibits another instance of the imperfection of our present system of symptomatic nosology. In this case there was no symptom wanting of disease in the bowels, and scarcely any symptom present of disease of the stomach, not even nausea, and yet the former were found nearly healthy, whilst the latter was extensively disorganised by malignant ulceration.

From the patient's own account of his complaint, it would follow that it was only of five weeks' standing. It was obvious, however, from the appearances after death, that it must have commenced at a much earlier period. He became aware of the complaint, as it would appear, only when it interfered materially with the digestion of his food, which was then passed on from the stomach into the bowels in such a state as to produce the dysenteric symptoms which induced him to apply for relief.

CASE III. *Malignant Tumor within the Thorax.*

On Thursday, 15th November, Dr. SEYMOUR was requested to visit Mr. A. B., æt. fifty-one, who had generally enjoyed a remarkably good state of health. In May last he was attacked with cough and difficulty of breathing, which he attributed to exposure to draughts of cold air: he brought up at this time a little blood by coughing. The ordinary remedies appeared to relieve, if not entirely subdue, the symptoms of the disease, and he was again enabled to take his usual exercise, which was uncommonly violent —walking considerable distances, or riding a young and unruly horse. About six weeks ago the symptoms returned, and he coughed up a small quantity of dark-coloured blood.

At present he complains of difficulty of breathing, accompanied with constant, and occasionally violent, fits of coughing; expectoration very scanty; his inspiration is difficult, and his attempts to take a long breath are accompanied with a wheezing noise on the right side of his chest, although he fills the lungs on that side completely with air. The ribs on the left side appear fixed, and the left lung impervious to air. Pulse ninety, not weak; skin cool; lies with equal facility on either side or on his back; sleeps ill habitually, and this inconvenience has been lately much increased; tongue clean and moist; no accessions of hectic fever; complains of weight and tightness at the scrobiculus cordis, and want of appetite; bowels regular.

Capiat Pulv. Ipecac. ℈j. pro emetico statim.

November 16th.—The emetic relieved the sense of weight and tightness in the epigastric region. Pulse 100, not weak; expectoration frothy; respiration in the right side of the thorax attended with a peculiar harsh noise, like the blowing of bellows; on the left side the sound is perfectly dull, and the ribs are not raised on inspiration; countenance extremely pale and anxious; no unusual pulsation to be found or pain experienced in any part of the chest; bowels not open.

Fiat V.S. ad ℥xvj.—℞. Hydrarg. Submur. gr. iv.; Pulv. Jacobi Vir. gr. iv. M. fiat pulvis h. s. sumend.—Haust. Sennæ c. m.

17th.—Blood drawn yesterday much buffed and cupped; sonorous respiration in right side of the lungs continues; he raises slightly the ribs on the left side during respiration; pulse ninety-six, not weak.

Repet^{r} V.S. ad ℥xvj.—℞. Pil. Hydrarg. gr. iij.; Scillæ recentis gr. ij. M. fiat pilula bis in die sumend.—R. T. Camphoræ c. ʒj.; Mist. Amygd. ʒx.; Muc. Gummi Acac. ʒij.; Syrupi ʒj. M. fiat haustus h. s. sumend.

17th.—Blood drawn not buffed or cupped; respiration easier, but very sonorous at intervals; pulse ninety; expectoration free, frothy.

C. C. lateri sinistr. ad ℥x. postea admoveatur Emplast. Cantharidis pectori.—Contin. alia.

18th.—The symptoms the same as yesterday. The remarkable imperviousness to the admission of air in the left lung, the absence of hectic fever, the expectoration being frothy and without the least trace of puriform matter, and the absence of pain, induced me to believe the symptoms to arise from the pressure either of an aneurismal tumor, or one formed by enlarged glands at the origin of the bronchi, especially on the left side. In consequence of this view of the case, (says Dr. Seymour,) the family were informed of my fears and my despair of its favorable termination.

The event justified the prognosis given by Dr. Seymour, as his patient gradually got worse, and died on the 2d of December.

Examination of the body, thirty-two hours after death.—A tumor was found in front of the chest, above the heart, situated for the most part anterior to the roots of the lungs, but surrounding the lower part of the trachea and both bronchi, the trunk and branches of the pulmonary artery, the pulmonary veins of the left side, the arch of the aorta and left carotid and subclavian arteries, but leaving the anterior part of the ascending aorta and arteria innominata uncovered. Behind, it was in contact with the œsophagus; and below, with the upper part and left side of the pericardium; thence it extended into the left lung, so that nearly half of that viscus was occupied with a similar congeries of globular tubercles, the largest about two inches and a half in diameter. The tumor of the lung adhered to the left side of the pericardium, to the diaphragm, and to the vertebræ and heads of the ribs behind, so that the lung could not be removed without tearing through the tumor. Most of the masses composing the tumor were of a white colour, but some were black in the centre, and others had begun to become soft and red in the inside. Where the tumor was in contact with the diaphragm, that membrane had become softer. A rupture had taken place, by which an effusion of blood had occurred, from the centre of one of the tubercles behind the vena cava descendens into the cavity of the pericardium, which contained about a pint of fluid blood.

The left bronchus and its branches were much lessened in diameter by thickening and pressure, and the remaining part of the lung of the left side scarcely crepitated, being filled with mucus and watery exhalation. The tumor had grown most in the lower lobe, so that very little of the texture remained; which, however, was solid. The pleura covering this lobe was much thickened, and adhered to the ribs. Many irregular white masses of condensed cellular-membrane extended from the tumor into the outer part of the lung, thicker and less ligamentous than the bands usually are in cancerous tumors.

The disease did not reach beyond the root of the right lung, which was red and full of fluid, and the pleura contained a number of white spots of a cartilaginous consistence, which were of the size of a split pea.

A tumor similar to that in the chest, and about the size of a small orange, was situated above the head of the pancreas.

The rest of the viscera were healthy.

This case affords a well-marked example of a disease, which, although it is known to practitioners of long and extensive experience, is nevertheless rare.

It appears to have been known to MORGAGNI, who has described it as a peculiar appearance, as resembling fatty tumors, *(quasi steatomata,)* in Art. 22, Epist. 22. It has been much commented on by modern French writers. BAYLE terms it cancerous tubercle of the lungs; and by LAENNEC it is called *Encéphaloides des poumons*, because, in its advanced or third stage, it occasionally resembles in appearance and consistence medullary matter. It is the Fungous Hæmatodes of English writers. Bayle has the merit, among the French, of having first described it under the title *Phthisie cancereuse*.

Until the deviation from the laws which govern the animal body in a state of health, which precedes these formations, be understood, we must be satisfied with palliative treatment.

By relieving the symptoms which arise from pressure, by moderate venesection, by enjoining perfect rest and strict diet, restraining the irritating cough by mild opiates, and supporting the occasionally fainting powers with diffusible stimulants, we shall contribute to the comfort of the patient, and delay the fatal event.

IODINE.

Cases of Enlargement of the Liver and Spleen, treated with Iodine.

Case I.—Henry Baynes, æt. five years and five months, of a slight figure and scrofulous diathesis; admitted a patient at the Royal Universal Infirmary for Children, August 25th, under the care of Dr. Milligan. Complains of a tumor occupying the right hypochondrium, extending anteriorly in a line with the linea alba, and inferiorly to the superior part of the hypogastric region. It is firm, colourless, it pushes out the false ribs considerably, and is attended with shooting pains occasionally. Pulse regular; skin cool; bowels open twice a day; passes his urine in bed. His mother first perceived the tumor six months since, which has gradually increased to its present size. He has been under the care of several medical men, and has used mercury for it.

℞. Tinct. Iodinæ gtt. xlviij.; Aquæ fontanæ ℥vss.; Syrupi simp. ℥ss. Capiat cochl. amplum nocte maneque.

August 28th.—Shooting pains removed; tumor appears a little diminished; pulse regular; appetite better; bowels open twice a day; stools of a dark brown colour.

℞. Hydr. Submur. Sub. gr. ij.; Rhei Pulv. gr. iv. M. fiat pulvis statim sumendus.—Repet^{r} Mistura Tinct. Iodinæ.

September 18th.—Tumor continues to diminish; general health improves. Has ceased to pass his urine in bed.

Cont^{r} Mistura Tinct. Iodinæ.

[Had an attack of catarrh, during which the Iodine was intermitted for a short time.]

November 3d.—Tumor much softer, and continues to diminish in size; appetite good; sleeps well; pulse regular; skin cool; tongue clean and moist; bowels open.

℞. Cascarillæ Pulv. gr. v.; Ferri Tartarizati gr. iv. M. habeat xij. tales. Capiat unam ter die.

16th.—No tumor felt on examination of the soft parts of the abdomen; the false ribs still project, but general health is entirely restored. Discharged cured.

Case II.—Elizabeth Howard, æt. twenty months.

June 19th.—Was admitted a patient at the Universal Infirmary for Children, last week, for tertian ague, at the same time with her brother, who laboured under the same disease. Mr. Woodham, the house-surgeon, saw them, and prescribed some bark, which has removed the intermittent. A large tumor is perceptible in the left hypochondrium, extending to the linea alba anteriorly, and lower part of the iliac region inferiorly. Her mother observed this swelling commence about eight months since, after an attack of ague, and it has gradually acquired its present size; pulse small and weak; appetite bad; no thirst; five stools yesterday, of a dark green colour.

August 18th.—Mercury used externally and internally, with little intermission, up to this period, without any improvement in the tumor, Dr. Milligan determined on giving the tincture of iodine.

℞. Tinct. Iodinæ gtt. xiij.; Aquæ font. ℥jss.; Syrupi simpl. ℥ss. Dentur cochl. duo min. nocte maneque.

25th.—Tumor considerably diminished in size and become softer.

Repet^{r} mistura.

Sept. 1st.—Tumor reduced to a very small size and feels soft.

11th.—The enlargement of the spleen has almost disappeared, but another tumor is felt in the pubic region, the margins of which are altogether unconnected with the spleen: this seems to depend on some mesenteric glands being very much enlarged.

Repet^{r} mistura; augenda dosem ad gtt. iv. bis die.

18th.—Tumor in pubic region diminishes; general health very good.

Repet^{r} mistura; augendo dosem ad gtt. v. bis die.

22d.—Both tumors removed; general health continues good.

Repet^{r} mistura.

26th.—Quite well. Discharged cured.

CASE III.—David Brewer, æt. seventeen months.

June 19th.—His mother applied for some medicine for a cough which he laboured under. On examining the abdomen, a very large firm tumor was discovered, occupying the left hypochondriac region, extending to the umbilicus and lower part of the iliac region. She has observed his abdomen become gradually enlarged since he was six months old; pulse 130; skin hot; appetite pretty good; bowels confined; last stools dark coloured.

September 11th.—Calomel in small doses, and the mercurial liniment, were continued up to this period, with little alteration in the tumor.

℞. Infusi Quassiæ ℥iv.; Tinct. Iodinæ gtt. xxxij. M. dentur cochl. duo min. nocte maneque.

18th.—Tumor diminished, and softer; general health improved.

Repet^{r} mistura.

25th.—Tumor diminishes daily: it is now but little apparent, after a careful examination of the soft parts. General health good.

Cont^{r} medicamenta.

October 2d.—Tumor has entirely disappeared; general health good. Discharged cured.

In the cases above related (in the Medical Repository,) enormous enlargements of the liver and spleen were speedily removed by iodine, given internally, in the form of tincture, after mercury had been given without success. The general health of all the children improved under its use; and, in the case No. 1, incontinence of urine, of long standing, was cured by it.

Iodine appears to possess considerable tonic powers; being a still more powerful stimulant than mercury. It acts as a stimulus to every sensible and moving fibre of the body. In the chronic inflammation particularly, which affects the glandular organs, it is a powerful remedy in counteracting it, and in removing that state of morbid structure which is often its consequence.

Like other powerful remedies, it may no doubt be abused: this, however, is no argument against its properties. Its administration requires to be conducted with much care, being occasionally intermitted, and not too long persisted in; and immediately relinquished if it occasion nausea or purging, vertigo or headache, which are the only bad effects Dr. Milligan observed from its use. When administered to females, its effects should be well watched, as cases are recorded where the mammæ have been entirely absorbed during its long-continued use. But where the removal of a dangerous disease becomes paramount to every other consideration, as in cases of an enlarged thyroid gland pressing on the trachea, and threatening suffocation; and other enlargements, particularly of the scrofulous kind, which other remedies have failed to relieve, the symmetry of the female must become a secondary consideration, and leave little doubt of the propriety of having recourse to iodine. Its good effects, in these cases of very young children just related, go to establish the safety and propriety of the remedy, and afford striking proofs of the advantage to be derived from it.

CRITICAL ANALYSES.

> Quæ laudanda forent, et quæ culpanda, vicissim
> Illa, prius, cretâ; mox hæc, carbone, *notamus*.—PERSIUS.

Pathological and Practical Researches on Diseases of the Brain and the Spinal Cord. By JOHN ABERCROMBIE, M.D. Fellow of the Royal College of Physicians of Edinburgh, &c.—8vo. pp. 444. Waugh and Innes, Edinburgh, 1828.

DR. ABERCROMBIE has been long before the public as an industrious and successful cultivator of pathological knowledge, and his various contributions towards illustrating the characters and elucidating the nature of several perplexing forms of disease have acquired him a high reputation as a pathologist, wherever that essential branch of medical science is duly appreciated. The present volume embraces a more extended and connected view of a most important class of diseases, which formed the subject of a series of papers published by the author, some years ago, in the Edinburgh Medical and Surgical Journal. The plan followed in the course of the investigation is that now happily adopted by the best pathologists in their researches into the nature of diseases,—viz. a faithful record of facts and observations as they present themselves in the course of practice; and these not on a limited, but an extensive scale. The author disclaims all purpose of writing to support any particular system of doctrines, and sufficient evidence appears in the sequel to justify the assertion, and prove his readiness, at all times, to abandon theory and hypothesis when not supported by facts.

The Diseases of the Brain are arranged by the author under three heads:—1, The inflammatory affections; 2, the apoplectic affections; and, 3, the organic affections. A fourth part of the work is devoted to Diseases of the Spinal Cord and its membranes, with an appendix exhibiting a short outline of the Diseases of the Nerves.

In the first class, the author treats of inflammation of the dura mater,—of the arachnoid and pia mater, or *Meningitis*,—inflammation of the substance of the hemispheres,—and inflammation of the central parts and ventricles, comprehending the various forms of disease which have usually been included under the term *Acute Hydrocephalus;* with a short notice of certain conditions which appear to be allied in their nature to the inflammatory affections,—viz. tubercular disease of the brain, certain affections of the pericranium and bones of the cranium.

The consideration of the specific inflammations is prefaced by a general view of the symptoms which indicate inflammatory disease within the head. In this excellent and truly practical sketch, the author depicts not only those characters which mark the full development of disease, but also those more faint indications, and those combinations of symptoms, which denote the first invasion of this dangerous affection of the brain, justly considering an early diagnosis essential to the security of the patient and the reputation of the physician. It is only in the early stage of the affection that curative measures can be undertaken with a reasonable prospect of success; and, since to detect inflammation of the brain is to detect danger, the practitioner who is acquainted with those signs which foretell the coming mischief will be saved, in many cases, the mortification of giving a false prognosis.

The author acknowledges that, in the present state of our information on the subject, we are not able to say, with confidence, what symptoms indicate inflammation of the substance of the brain, as distinguished from inflammation of its membranes. In a practical point of view, perhaps, this difficulty is not of much importance; the practical requisite being the ability to detect the existence of this diseased action in any part within the head, particularly at an early stage of its progress. The symptoms on which we are to rely in forming our opinion appear under a variety of forms, depending probably on the seat of the inflammation, as well as on its degree of activity. The leading modifications our author refers to five heads:—

1. The *phrenitis* of systematic writers, sufficiently characterised by its nosological definition. This is seldom met with as an idiopathic disease, except when brought on by insolation and the abuse of strong liquors. As a symptomatic affection, it is met with in fever, mania, and after injuries of the head. It is generally fatal in the inflammatory stage, before the occurrence of the disorganization resulting from the inflammation, which in this case has usually its primary seat in the membranes of the brain. An affection, of not unfrequent occurrence, is referred to this head, which, from its being unattended with the high febrile excitement of phrenitis, is apt to be mistaken for mania, but differs from it in the material circumstance of its proving rapidly fatal. It is characterised by a peculiar aberration of mind, without any complaint of pain. There is great restlessness, quickness and impatience of manner, obstinate watchfulness, and incessant rapid talking, the patient rambling from one subject to another, with little connexion, but often without any actual

hallucination. He knows those about him, and generally answers distinctly questions that are put to him. The chief morbid appearance on dissection is a highly vascular state of the pia mater.

2. In a second form, the first symptom that excites alarm is a sudden attack of general convulsions, either without any previous illness, or preceded by slight complaints which had attracted little notice. The convulsion may be long and severe, followed immediately by coma, terminating fatally in a few days; or it may occur frequently, the patient in the interval being sensible; but, after the lapse of twelve or twenty-four hours, passes into coma. From this state the patient may appear to recover, and to go on favorably for several days, when, without any warning, the convulsions return, and terminate in fatal coma. In some cases the convulsion is confined to one side of the body or to one limb, and is usually followed by partial paralysis; and in others the first symptom is an attack of paralysis, bearing a close resemblance to the ordinary attack of hemiplegia. This form of disease, in which the prominent symptoms are spasmodic or paralytic, is usually connected with inflammation of a defined part of the cerebral substance passing into suppuration or ramollissement, though it may be fatal without passing beyond the state of simple inflammation. In other cases, again, the inflammation is confined to the membranes.

3. The third class of symptoms indicative of inflammation within the head, is mostly observed in children, but may also appear in adults. In this instance the affection does not invade with the peculiar violence observable in the two former varieties. It is usually preceded by a day or two of languor and peevishness, followed by an accession of fever, which is sometimes ushered in by severe shivering. The patient is oppressed, and unwilling to be disturbed, and complains of acute pain in some part of the head, with flushing of the face and impatience of light, disturbed sleep, frightful dreams, and violent grinding of the teeth. These symptoms may occur with disorder of the alimentary canal, but not unfrequently when the bowels are natural and the tongue clean. After some days, slight delirium begins to appear, at first transient and only during the night. In other cases, instead of delirium, there is a peculiar forgetfulness, the patient using one word instead of another, misnaming things, mistaking the day or the time of the day; a confusion of thought of which he seems sensible, and anxious to divest himself. These symptoms are followed by drowsiness, which soon passes into coma, the more active symptoms at the same time abating.

The pulse, from being frequent, falls to the natural standard, or below it; the acute sensibility to light gives place to dulness of the eyes, squinting, or double vision; and, lastly, dilatation of the pupil and blindness. After a day or two, or perhaps a few hours only, the pulse begins to rise again, and rises to extreme frequency; the stupor continuing at the same time to increase till it becomes perfect coma, in which the patient lies for a few days before death closes the scene. There is an extreme inequality in the frequency of the pulse, varying perhaps every minute, or every time it is counted. This remarkable inequality the author deems deserving of particular attention, as being peculiar to dangerous affections of the head. In some cases the pulse does not come down, but continues uniformly frequent throughout the whole course of the disease. The duration of the complaint is extremely various. It is sometimes protracted to three weeks, and in others, particularly in young children, it proves fatal in five or six days. At some period of the disease, generally when the pulse is falling in frequency, or when it is beginning to rise after becoming slow, there is a remarkable remission of all the symptoms, giving sanguine but deceitful hopes of recovery.

4. The fourth modification of symptoms usually occurs in young persons, towards the age of puberty and upwards. The affection begins like a slight feverish disorder, with headache, and for a long time excites no alarm. The febrile symptoms are slight, and may yield to the usual treatment, the tongue becoming cleaner, and the appetite better; but the headache continues obstinate, seldom severe, but never quite gone, and attended with a listlessness and oppression which cannot be accounted for by the degree of fever present. In this way the disease may go on for several days, until, about the twelfth or fourteenth day, the pulse suddenly falls to the natural standard, or below it, while the headache increases, with an evident tendency to stupor. This instantly marks a head affection of the most dangerous character; stupor and coma supervene; the pulse rises, and the disease runs the fatal career described as marking the progress of the last variety, to which it bears a close resemblance, but differs from it in the very insidious mode of its encroachment; cases occasionally occurring in which there is not even the slightest complaint of headache through the whole course of the disease.

5. Another form of the disease, which is most commonly met with in adults, begins with violent pain in the head, generally deep-seated, *without fever.* The patient is found

lying in bed, with a look of much oppression, holding his head with both hands, and unwilling to be disturbed, or tossing about from the violence of the pain. The face is sometimes flushed, at other times pale, with a contracted pupil and impatience of light. The pulse, which at first was at the natural standard, or was falling to fifty or sixty, rises in the progress of the complaint to 120 or 130. There is more or less delirium, which begins early, and that peculiar forgetfulness and confusion of thought already mentioned as characterising, in the absence of fever, dangerous cerebral affection. There is generally towards the end more or less also of coma, which usually sets in in five or six days, and continues to the last, but occasionally disappears before the fatal termination.

To the foregoing account of the most common forms which inflammatory affections of the brain assume, the author subjoins a simple enumeration of all the symptoms, as observed in the *head*, the *circulation*, the *muscles*, the *organs of sense*, and the *intellectual faculties;* but adds, that a minute attention to the *correspondence* of the symptoms is of more importance in establishing a diagnosis than any individual symptom, however strongly marked. Thus, the peculiar oppression, the headache, and delirium, which accompany high fever, are not reckoned particularly unfavorable; while the same symptoms occurring without fever, or with very slight fever, would indicate a head affection of the most dangerous character. This truth is fully established by the cases detailed in illustration of the text; and in the following extract, as well as in other places, we find the author anxious to impress on practitioners the necessity, in all head affections, of narrowly watching the case long after symptoms of a serious or suspicious tendency have subsided.

"In all the forms of this dangerous affection, there is great variety in the symptoms, and much observation is required to put us fully upon our guard against the insidious characters which many of the cases assume, and the deceitful appearances of amendment which often take place in all the forms of the disease. Even in those cases which have assumed the most formidable aspect, every alarming symptom may subside. The pulse perhaps continues frequent, but it also is coming down; at our successive visits we find it falling regularly, and we are disposed to hope that a few days will bring the case to a favorable termination. During this deceitful interval, which may continue for several days, I have known a parent intimate to the medical attendant that his farther visits were unnecessary; and I have known a physician take his leave, considering his patient as convalescent. As the pulse falls, the patient is disposed to sleep: this perhaps is considered as favorable; it falls to the natural standard; he then sleeps almost constantly, and in another day this sleep terminates in coma. The pulse then begins to rise again; it rises to extreme frequency; and in a few days more the patient dies. All this may go on with very little complaint of headache, and without any symptom that will lead a superficial observer to suspect danger, until he finds his patient gliding into coma at the very time when he expects recovery; for the period when the pulse falls to the natural standard is the time when the coma becomes evident, and the situation of the patient probably hopeless. Whenever, therefore, at any period of a febrile disease, there have been remarkable symptoms in the head, such as violent headache, with vomiting and impatience of light, stupor, convulsive affections, or affections of the sight, though these symptoms may have entirely subsided, and the complaint may have again assumed the characters of simple fever, we must not consider the danger as over, but must be upon our guard against a period of anxiety which is still before us. An attentive observer may generally remark, in such cases, something which leads him to suspect that the appearance of amendment is deceitful. Sometimes there is a dilated state of the pupil, giving to the eye a peculiar expression, and sometimes there is a remarkable tendency to sleep. Frequently something unusual may be observed in the patient's manner, such as a fretfulness or querulousness which is not natural to him; a quick and hurried manner of speaking, or, on the contrary, a remarkable slowness of speech; difficult articulation, or a peculiar confusion of thought and forgetfulness on particular subjects. But it cannot be too strongly impressed upon the younger part of the profession, that cases occur in which all these symptoms are wanting, and in which the patient appears for several days to be in the most hopeful state of recovery, while in fact his disease is advancing rapidly to a fatal termination." (P. 13.)

Besides the modifications described in the above outline, numerous varieties occur which it is not easy to include under any general arrangement. All of them probably depend on the seat of the disease, the result of the morbid action, and its degree of intensity. The latter we find varying from the pure scrofulous inflammation, with the lowest degree of activity, to that accompanied with symptoms of the highest excitement.

When we investigate these affections in a pathological point of view, we find them terminating fatally in various ways. They may prove fatal in the first stage without any actual result of inflammation; and this, we have seen, may occur whether the inflammation is seated in the substance of the brain or in the membranes. The more common terminations, however, are by serous effusion, deposition of false membranes, suppuration, ramollissement, and lastly in a chronic form, with thickening of the membranes, contractions and obliteration of the sinuses, or caries of the bones. But the results obtained on dissection are not always uniform, the terminations being variously combined, but all of them generally accompanied with more or less of serous effusion.

We find *serous effusion* varying in its seat, as well as in its quality and quantity. In most instances it may be traced to direct inflammatory action, though there is reason to believe that, as in other parts of the body, it may be the result of obstructed circulation in the veins, such as might be produced by congestion, the pressure of tumors, and chronic disease of the sinuses. It is found in the ventricles, under the arachnoid, betwixt the arachnoid and dura mater, and betwixt the latter and the bone. In quality it may be limpid, turbid, flocculent, or even bloody and semipurulent; and in quantity, it varies from a few drachms to eight or ten ounces.

The deposition of false membranes is the result of inflammation of the membranous parts, and may be met with wherever these exist, though its most common seat is under the arachnoid; in other cases, it follows the course of the pia mater, producing complete adhesion of the convolutions to each other.

Suppuration takes place under various forms: sometimes as a thin uniform layer under the arachnoid, or between the different membranes; occasionally in the ventricles, but most commonly as well-defined encysted abscesses in the substance of the brain itself. Sometimes these abscesses are extremely minute: an example is given of a well-defined abscess, no larger than a common bean, in the substance of the corpus striatum. At other times a considerable portion of the cerebral substance is found in a broken-down state, in which, without any well-defined cavity, pus is found mixed with disorganised cerebral matter.

The morbid condition of the brain which has received the name of softening, or *ramollissement,* has given rise to some difference of opinion as to its precise nature. It consists in a conversion of a part of the cerebral substance into a soft pulpy mass, retaining its natural colour, but having lost its cohesion and consistence, yet differing from suppuration in having neither the colour nor the fœtor of pus. Since the time when our author first investigated this condition of the brain, and ranked it as a result of inflammation, it has been the subject of much research by M. ROSTAN and other French pathologists, who contend for a different nature of the affection, believing it to be a disease *sui generis*,—a peculiar and primary disease of the brain, though occasionally a consequence of inflammation. Dr. Abercrombie endeavours to reconcile this diversity of opinion on the principle that this peculiar softening of the brain is analogous to gangrene in other parts of the body, and that, like gangrene, it may arise under two conditions of the system,—viz. over-action, in one case, and failure of the circulation, from disease of the arteries, in the other. In the cases related by M. Rostan, this disorganization was met with chiefly in very old people, and in connexion with attacks of an apoplectic or paralytic kind. In those which fell under our author's observation, it occurred chiefly in young persons, in connexion with cerebral affections of an acute character, and was seated, for the most part, in the dense central parts of the brain, and frequently combined with appearances of inflammation, or the results of inflammatory action, as suppuration, effusion, and the deposition of false membranes. It is found in combination with effusion in a very large proportion of the ordinary cases of hydrocephalus, and is sometimes the only morbid appearance met with after death in exquisitely marked cases of this affection. From this comparative review of the circumstances under which the affection occurred to M. Rostan and to himself, the author is disposed to consider that described by the French pathologists as the consequence of languor or failure of the circulation, and the examples which fell under his own observation to an opposite cause, increased vascular action, or active inflammation.

From the consideration of the symptoms and terminations in general of inflammatory affections of the brain and its envelopes, the author passes to a detail of cases illustrative of the disease as seated in particular textures: the different membranes, the ventricles, and various parts of the substance of the brain.

Inflammation of the dura mater is seldom met with as an idiopathic affection. One case, however, is detailed in which it appears to have been the primary disease, though in its progress it became complicated with extensive inflammation of the arachnoid. But it is frequently met with in another form, in which it occurs in connexion with affections of the ear, and of the petrous portion of the temporal bone. It is a highly dangerous affection, from the insidious way in which it invades, the first symptom being pain in the ear, which is usually treated lightly, till the supervention of shivering, drowsiness, oppression, and perhaps slight delirium, direct attention to its true character. Great restlessness follows, ending speedily in coma and death. A discharge of matter from the ear may precede or follow the serious symptoms, or these may supervene on a sudden suppression of the discharge. On dissection, we generally find caries of the temporal bone, with a corresponding portion of the dura mater detached, thickened, or ulcerated. In some cases there is a superficial abscess of the brain itself, or effusion into the ventricles, with other evidences of general cerebral affection. In one case detailed by the author, the left lateral sinus was remarkably diseased through its whole extent, and nearly obliterated. In most of the cases, the patients had been subject to attacks of pain in the ear, with discharge of matter. Sometimes the coma and other alarming symptoms are suddenly relieved by a discharge of purulent matter from the ear, but the relief is generally but temporary; and, in those cases in which complete recovery follows, it is by no means certain that the discharge comes from the cavity of the cranium, for there is reason to believe that an accumulation of matter within the tympanum will give rise to symptoms of oppression. A case of this kind is described by ITARD, in which partial alleviation of urgent symptoms took place from matter escaping by the eustachian tube, and complete relief followed from puncturing the membrana tympani.

Inflammation of the dura mater, with its consequences, is also found connected with disease in the nose. Cases of this kind are mentioned by BONETUS, LIEUTAUD, and MORGAGNI, in which persons liable to pain in the forehead, with purulent discharge from the nose, become at last forgetful, delirious, and die comatose. On dissection, the ethmoid bone is found carious, the dura mater corresponding to it diseased, with deposition of pus, and perhaps abscess of the adjoining portion of the brain.

Under the term *Meningitis*, the author treats of inflammation of the arachnoid and pia mater together, as it is very difficult, and perhaps of no material importance in practice, to discriminate between them. The disease usually terminates in a deposition of false membrane betwixt the arachnoid and pia mater, spreading uniformly over the surface of the convolutions, or dipping down between them and gluing them together. This deposition is met with most abundantly in the sulci between the convolutions, and in the depressions between the lobes, and often, of a gelatinous consistence, about the optic nerves. The membranes themselves, particularly the pia mater, often exhibit an intense degree of vascularity.

Several cases are given in illustration of this affection, exhibiting remarkable diversity of symptoms. The most usual form of attack is by convulsion, generally severe and long continued, and passing into coma, which afterwards alternates only with a repetition of the convulsions till the case terminates fatally. In other cases which run a fatal course, there is a remarkable remission of the symptoms at some period of the disease. A degree of this affection often attends other cerebral inflammations, but it is often met with entirely uncombined. The convulsive affections of children, which are apt to be indiscriminately attributed to dentition, are probably not unfrequently connected with this affection. An important variety is described, and two cases detailed, in which, from the prominent character of some of the symptoms, the affection is apt to be mistaken for mania, or, in females, for a modification of hysteria. The following is our author's account of this dangerous modification:

"Another important modification of the disease occurs in an insidious and highly dangerous affection, which I think has been little attended to by writers on the diseases of the brain. It is apt to be mistaken for mania, or, in females, for a modification of hysteria; and in this manner the dangerous nature of it has sometimes been overlooked, until it proved rapidly and unexpectedly fatal. It sometimes commences with depression of spirits, which after a short time passes off very suddenly, and is at once succeeded by an unusual degree of cheerfulness, which is rapidly followed by maniacal excitement. In other cases, these preliminary stages are less remarkable, the affection, when it first excites attention, being in its more confirmed form. This is in general distinguished by remarkable quickness of manner, rapid incessant talking, and rambling from one subject to another, with obstinate watchfulness, and a small frequent pulse. Sometimes there is hallucination, or conception of persons or things which are not present; but in others this is entirely wanting. The progress of the affection is generally rapid: in some cases it passes into convulsion and coma; but in general it is fatal by a sudden sinking of the vital powers, supervening upon the high excitement, without coma. The principal morbid appearance is a highly vascular state of the pia mater, sometimes with very slight effusion betwixt it and the arachnoid. The disease is one of extreme danger, and does not in general admit of very active treatment. General bleeding is not well borne, and the treatment must in general be confined to topical bleeding with purgatives, antimonials, and the powerful application of cold to the head. The affection is most common in females of a delicate irritable habit, but also occurs in males, especially in those who have been addicted to intemperance. I have, however, seen it in one case, in a gentleman between forty and fifty, of stout make and very temperate habits. The cause of death is obscure: it seems in general to be a sudden sinking of the vital powers, supervening upon the high excitement, without any of the actual results of inflammation." (P. 62.)

Meningitis appears also in a chronic form, exhibiting a protracted succession of symptoms,—chiefly headache, impaired vision, partial paralysis, convulsions or maniacal symptoms, and presenting, on dissection, thickening of the membranes, and depositions apparently of long standing.

Inflammation of the Hemispheres.—The usual terminations of inflammation seated in the substance of the brain composing the hemispheres, are ramollissement and suppuration: the latter occurring in an undefined form, or as an abscess regularly encysted; or, lastly, in the form of ulceration of the surface of the brain. It may also prove fatal in the inflammatory stage, before any of these results have taken place.

Numerous highly interesting cases, illustrative of this pathological condition of the brain, are detailed by the author; but, from want of uniformity in the symptoms, equal to, if not greater than what attends other cerebral inflammations, it is not possible to advance any general statement of the phenomena which attend it, or to refer particular symptoms to the particular seats or terminations of the disease. It is not, in general, attended by the high febrile excitement present in inflammation of the membranes. The most constant symptoms are pain in the head, often deep seated, and referred to a particular part, ending in coma, or in convulsions of one or more limbs, and followed by paralysis of the affected parts. The paralysis may occur early, and be only transient, or at a later stage of the disease, and prove permanent, when it may be presumed that the inflammation has terminated in ramollissement or suppuration. At the commencement we also find embarrassment of speech, obtuseness of hearing, and impaired vision, passing into complete loss of speech, blindness, and other characters of profound coma. Sometimes a remarkable recovery of speech takes place in the course of the disease, as well as a remission, under active treatment, of other characteristic symptoms. Inflammation of the hemispheres occurs also in a chronic form, proving fatal with or without the usual results—ramollissement and suppuration.

(To be continued.)

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

PHYSIOLOGY.

Remarkable Hairy Man.—As connected with this department, may be mentioned the existence at Ava of a man covered from head to foot with hair, whose history is not less remarkable than that of the celebrated porcupine man, who excited so much curiosity in England and other parts of Europe near a century ago. The hair on the face of this singular being, the ears included, is shaggy, and about eight inches long. On the breast and shoulders it is from four to five. It is singular that the teeth of this individual are defective in number, the molares, or grinders, being entirely wanting. This person is a native of the Shan country, or Lao, and from the banks of the upper portion of the Saluen, or Martaban river: he was presented to the king of Ava as a curiosity, by the prince of that country. At Ava he married a Burmese woman, by whom he has two daughters: the eldest resembles her mother; the youngest is covered with hair like her father, only that it is white or fair, whereas his is now brown or black, having, however, been fair when a child, like that of the infant. With the exceptions mentioned, both the father and his child are perfectly well formed, and indeed, for the Burman race, rather handsome. The whole family were sent by the king to the residence of the mission, where drawings and descriptions of them were taken.—(JAMESON's *Journal*, 1827.)

SURGERY.

Case in which the Canal of the Larynx, after being nearly obliterated, was re-established.—Elizabeth Oswald, æt. twenty-seven, in attempting suicide in September 1826, had wounded the larynx through the crico-thyroid ligament.

She was under treatment for some months, and was at length abandoned with the loss of voice, and breathing entirely through a silver tube introduced in the situation of the original wound. On withdrawing this tube, and examining the parts attentively, a very minute orifice, capable of admitting the point of a probe of half the usual size, was discerned leading towards the glottis.

About April 15, 1827, Mr. LISTON saw her by the request of Mr. SIDEY, who had attended much to the case from the first, and began to introduce bougies about the size of darning needles into the part of the trachea above the wound; and, by gradually increasing the size of the bougies, the passage was brought, about the end of June, to its natural diameter. About the middle of August, the lower part of the trachea was dilated by a tube gradually increased in size, so that one of sufficient diameter might be passed by the mouth.

Three weeks afterwards the short tube was removed, and a long one was introduced by the wound up into the mouth, there laid hold of and pushed down into the trachea. This was followed by a very severe fit of coughing, which lasted about half an hour.

This tube, which was about nine inches long, and equal in diameter to that of the largest œsophagus tubes, was retained in the windpipe for fifteen days, during which it caused great salivation, which loosened the teeth and extremely reduced the strength of the patient. In consequence of this it was necessary to use some active means for the closure of the wound. On the fifth day the cicatrix was dissected out by two elliptical incisions, and the edges of the wound united by suture. The tube being removed on the fifteenth day, (October 5th,) she breathed well. In the morning, however, her breathing became very difficult, and tracheotomy was performed, and a silver tube introduced, which was kept in five days, and then replaced by a smaller one.

The actual cautery was applied to the edges of a small sinus, which remained on October 17th; and on the 26th, it was reapplied to the opening, which had very nearly closed. On the 28th, the tube was removed; and a few days after the wound was completely closed. The woman now breathes with comparative ease through the larynx, and is slowly recovering the use of her voice. (*Edinburgh Med. and Surg. Journal.*)

Causes of the Fatal Termination of certain Cases of Bronchotomy, by Dr. Cullen.—By the united researches of the French academicians and our own most intelligent surgeons, it was indisputably proved that bronchotomy afforded the only chance of relief in the case of foreign bodies in the trachea, and the only chance of recovery in many cases of cynanche laryngea.

It was proved also that wounds of the larynx or trachea, though inflicted on membranous or cartilaginous parts, were not, on that account merely, of a very dangerous nature, as the ancients had erroneously supposed; and the absolute safety of the operation was perhaps too confidently maintained. At least, I must confess that I have been induced to form an opposite opinion from reflecting deeply on the uses of the larynx, and on symptoms which I have witnessed in cases that have fallen under my observation.

In illustration of the opinion that wounds of the air-passages, even when inflicted on a healthy subject, are not only not trifling, but often highly dangerous, and followed by fatal consequences, the following case, which was treated by me in the Royal Infirmary, may be quoted.

A. B., a healthy-looking married woman, twenty-five years of age, and mother of one child, was subjected at home to many causes of mental irritation from the misconduct of her husband, and the unkindness of her friends. These acting on an irritable habit, produced a great depression of spirits, under the influence of which she tried to lay violent hands on herself, by cutting her throat with a table-knife. The instrument, however, was blunt, and she failed in her object, having been able to make only a slight incision, of about three inches in length, through the skin and cellular tissue over the crico-thyroid membrane. The latter likewise was divided to a small extent, and an opening was made into the larynx hardly capable of admitting the point of the little finger.

The accident occurred at ten A.M. When I saw the patient about noon, I found the wound in the situation, and of the size, above described; she breathed entirely through it, and consequently her voice was lost, except when the orifice was stopped up, when she spoke quite distinctly by means of the glottis. She had no difficulty of breathing, no attempt at coughing, no hemorrhage. In fact, she made no complaint. The case, however, seemed otherwise alarming. She was slightly delirious, always on the subject of her domestic grievance; the pulse was small and feeble; her face was rather flushed; the tongue was white and tremulous when protruded; and the countenance had a peculiar expression of anxiety and suffering. By means of a proper bandage, the head was bent down upon the sternum, so as to close the orifice in the crico-thyroid membrane, upon which a simple pledget was applied, no other dressing being thought necessary, as it was determined to let the wound heal slowly, in its own way, by granulation.

The head symptoms seemed much more urgent; inflammation of the arachnoid membrane was suspected, a disease which I have uniformly found most difficult of cure. When depending on mental distress, it is a complaint often fatal, particularly when, occurring in those who have attempted their lives, it is treated too actively by blood-letting. I contented myself, therefore, with desiring that the patient should have her head shaved, and that ice should be applied to it; that she should occasionally have a small quantity of wine-and-water, if she seemed disposed to sink; that a brisk cathartic should be given; and that she should be removed to a darkened chamber, where she could be kept cool and perfectly quiet.

These measures appeared to have a very salutary effect. At seven P.M. she was more composed; the expression of the countenance was improved; the dressings were displaced, and she breathed fully from the external orifice. The wine was ordered to be stopped, and the ice to be regularly continued.

The next morning, she was reported to have passed a quiet but sleepless night. The pulse was firmer than before. She had some cough, or rather violent expirations in place of cough, unaccompanied by sputum of any kind.

In the evening, the delirium seemed to have increased, with tendency to noise and violence. The respiratory symptoms were the same as before. Ten leeches were ordered to be applied to the forehead and temples.

Next morning, she was rather better; the cough, however, was somewhat increased, and she had slight expectoration of viscid clear transparent mucus. This expectoration was brought up with great difficulty. It was expelled through the wound, not by coughing, strictly so called, but by expiration merely; and that with so little force, that it had to be pulled out of the wound by the fingers of the patient or the nurse. A mucilaginous antimonial mixture was ordered.

In the evening, the symptoms were much the same as in the morning; the expectoration rather more copious; and the stethoscope detected acute inflammation in the smaller branches of the bronchi. A large blister was applied to the sternum, as the state of the intellectual functions and constitutional powers seemed to forbid the use of the lancet.

Next morning the patient was thrown into considerable agitation by a visit from her husband. She was very delirious at the visit at noon. The sputum was more copious, and still got rid of with much difficulty. She was ordered an anodyne draught, which procured a few hours' quiet repose, and soothed her excited imagination. I was in hopes, therefore, that the patient was to do well, as she had no threatening symptoms referable to the chest, and as the head symptoms were comparatively moderate and manageable.

Next morning, however, at five o'clock, Dr. Lubbock, the house-surgeon, to whom I am much indebted for his assistance in the management of the case, was suddenly roused from his bed, as the patient was reported to be dying. He found her on the point of suffocation, breathing very hurriedly with great difficulty, with the death rattle in her throat, livid face, and cold extremities. She was unable to expecterate. Dr. Lubbock immediately introduced a large curved canula into the wound, through which the patient was enabled to take a full inspiration. The effect of the introduction of the instrument was, that the breathing became much easier; and, as the alarming symptoms evidently arose from the accumulation of mucus in the bronchi, she was strongly recommended to cough as much as she could. By degrees she was enabled to bring up mucus through the canula, not, however, by coughing, but simply by expiration, which, as the canula was of large size, she could perform with considerable force.

In the course of a short time, as the expectoration became more free, the alarming symptoms subsided; the rattle in the throat was no longer heard, the breathing became easy, and the expression of the countenance very greatly improved.

Having been thus apparently rescued from the very jaws of death, she was left under the care of the nurse, who was directed to request her from time to time to make attempts at coughing. At noon, when I paid her a visit along with Dr. Lubbock, I found her very nearly in the same state from which she had been recovered with so much difficulty in the morning. The canula had slipped out of the trachea; the extremities were cold, the lips livid, the pulse hardly perceptible; the respirations rare, difficult, and accompanied with a frightful rattle, in the bronchi; no expectoration; no attempt at coughing; and a great degree of stupor. In a loud tone of voice I desired her to cough, *but she could not make the attempt.* To enable her to expectorate, to allow her to cough, I placed my thumb on the orifice of the crico-thyroid membrane, so that she breathed entirely by the glottis much more freely than she had done before through the artificial opening.

When the respiration was a little improved, I requested her to cough. She could now do so readily enough, and brought up some very tenacious mucus, by the excretion of which the respiration was still further improved.

In the course of about a quarter of an hour, in consequence of the free expectoration, the breathing became quite easy; the expression of the countenance improved; and the lips regained nearly their natural hue. I directed a dresser to remain constantly with the patient, to keep the crico-thyroid membrane closed with his thumb, and to direct her to make attempts at coughing from time to time, and, if she refused, to tickle the epiglottis with a feather. For about an hour and a half the patient complied with the directions given her, and coughed up a considerable quantity of mucus; but by degrees she became more and more insensible, and would not cough; titillation of the epiglottis produced no effect; the mucus accumulated in the bronchi, and she died of suffocation about four o'clock.

Sectio cadaveris, twenty-one hours after death.—Upon opening the cranium, the vessels were found much more numerous than usual, more highly injected, especially on the surface of the right hemisphere. There was a good deal of serum in the subarachnoid cellular tissue, but the serous surface of the membrane was perfectly natural.

The substance of the brain was more vascular than usual, but not inflamed, softened, or otherwise disorganised. There was a considerable quantity of serum in the interior of the ventricles; a large quantity also at the basis of the brain, where likewise the membranes were much more vascular than usual, particularly on the tuber annulare.

Upon opening the chest, the pleura was found in a perfectly natural state.

The bronchi, particularly the left, were obstructed with bloody mucus. There was a small quantity in the trachea. The lungs were every where soft, crepitating, elastic, and only a little more vascular than usual.

In the neighbourhood of the wound, the mucous membrane of the larynx was inflamed, and red from increased vascularity, but it was not thickened. There was no effusion of fluid into the submucous cellular tissue, and consequently no diminution in the diameter of the glottis. Immediately at the edge of the wound, there was a slight effusion of lymph. The membrane of the trachea and that of the bronchi were inflamed and highly vascular, not thickened, but perhaps a little softer than natural; and it seemed as if the inflammation had spread down the air-passages, into the minute branches of the bronchi.

This case illustrates in a very forcible manner the truth of some observations on bronchotomy, published in the Number of this Journal for July last. I took occasion in that paper to call the attention of the profession to the physiology of coughing, and to the danger which necessarily attends on a copious secretion of mucus from the bronchi when an opening has been made in the trachea. For, to produce full and vigorous coughing, so as to clear the minute branches of the bronchi of their fluid secretion, the expiratory muscles must for a certain time act in opposition to the constrictor muscles of the glottis. When by this antagonism the former have acquired sufficient force, the latter are suddenly relaxed, and in the moment of their relaxation coughing takes place, and mucus or pus is expectorated along with the air thus violently expelled; but, when an opening is made into the trachea, expectoration immediately becomes difficult, for the expiratory muscles have no longer their antagonist constrictors of the glottis to act against. They cannot therefore acquire sufficient force to produce that strong current of air which is at least highly favorable to expectoration. A patient, therefore, after bronchotomy, cannot perform the act of coughing, properly so called. He can only expire with a force proportioned to the quantity of air he can take into the lungs.

The truth of these observations is borne out by what I have noticed in all the cases in which I have seen bronchotomy performed. I have uniformly observed that expectoration immediately became difficult after the operation. The patient could not drive the expectorated matter through the canula, for the current of air was too weak; and hence I have seen death ensue from a small quantity of blood getting into the trachea.

It was my thorough conviction of this truth that made me close the external wound entirely, when I found the patient on the point of suffocation. The effect of the closure was, that the muscles of the glottis were called into play; the patient was enabled to cough, and consequently to expectorate, so as to get rid of the mucus which obstructed the bronchi: she, however, had a few hours before derived equal relief from a directly opposite practice,—viz. the introduction of a canula into the wound; and the alarming symptoms had recurred only because the instrument had been displaced. This fact admits of a very satisfactory explanation. A full inspiration is favorable to expectoration, and the force of the expiratory muscles is in proportion to the quantity of air inhaled. The wound in the patient's throat, never very large, was considerably diminished by the swelling of the surrounding parts; she could not therefore take in a large quantity of air, while, on the other hand, she had lost the use of the constrictor muscles of the glottis; and therefore her expectoration was difficult, or rather impossible. But when a large canula was introduced, she could take in a large volume of air, on which the expiratory muscles could act with such force as to produce expectoration. Both practices, therefore, though diametrically opposed to each other, were perfectly judicious under the circumstances of the case; but on far different grounds. The closure of the external orifice allowed the muscles of the glottis to act, and genuine coughing to take place; by the introduction of a wide canula, a large quantity of air found admission to the lungs, which is to a certain degree a substitute for proper coughing.

These considerations lead to some important practical views, and enable us to explain the fatal termination of many of the recorded cases of bronchotomy. In the first place, the canula employed ought always to be large. If it be small, the breathing will be difficult. During the inspiration, blood will be sucked into the trachea from the edges of the wound, and a quantity of air sufficient for the purposes of respiration will not be admitted to the lungs. Secondly, when inflammation exists in the minute branches of the bronchi, attended with plentiful secretion, the introduction of a large quantity of air is absolutely necessary for expectoration. A small quantity of air cannot acquire sufficient force to bring up along with it the secretions of the bronchi. We can explain on the same principle why bronchotomy is so rarely successful when diseases have extended into the minute branches of the bronchi. After the operation the expectoration becomes more difficult, from the constrictor muscles of the glottis being rendered useless. Mucus accumulates more and more down the air-passages, and the patient dies gradually suffocated.

In severe cases of inflammation of the lungs, the expectoration is commonly suppressed a short time previous to death, but it does not cease to be secreted, it is only not excreted; for, in proportion as more and more of the lungs becomes useless for the purposes of respiration, of course a less quantity of air can be introduced at each inspiration, till at last the quantity is insufficient for a forcible inspiration or coughing; then, of course, the minute branches of the bronchi continue loaded, and the patient is suffocated. These observations on the influence of bronchotomy on coughing and expectoration were partially laid before the profession in the Number of this Journal for July last; but the paper was too concise, and was misunderstood, particularly by the editor of the London Medico-Chirurgical Review. That gentleman may depend upon it that it is not wrong to say that a patient with a tube in the trachea can most commonly only produce a current of air too weak for the purposes of expectoration. I have never seen a patient expectorate matter through the canula with any thing like freedom. It has been always necessary to extract the tenacious mucus by probes and other mechanical means. There has been uniformly a want of expiratory power, which the constrictors of the glottis alone could have supplied. My professional friends have assured me that their experience has been of the same kind: they have witnessed the same difficulty of expectoration. The editor, likewise, as an argument against the truth of my views, objects that, in the case formerly published, I had distinctly stated that, on the first introduction of the tube, a fit of coughing supervened, attended, to my great surprise, with expectoration of semitransparent viscid mucus. I was certainly surprised, because I had no reason to believe that any mucus was secreted by the bronchi; but the expectoration of it immediately after the introduction of the tube is not only not in opposition, but very strictly in accordance with my views of the physiology of the windpipe. The patient had laboured under laryngitis, by which the size of the rima glottidis had been so far diminished that a very small quantity of air could be introduced at each inspiration,—too little, indeed, for proper coughing. But as soon as an opening was made in the crico-thyroid membrane, and a large canula introduced, then the patient could breathe freely, and, though she could not cough, properly speaking, she could expire with considerable force, and thus get rid of a quantity of mucus in the way of expectoration.

From the foregoing statements I would draw the following practical conclusions:—

1st. Bronchotomy should not be performed in cases where inflammation and copious secretion exist in the minute branches of the bronchi,—at least such cases are most likely to terminate unfavorably. The operation, if performed, may relieve the breathing for a while, but it may occasion in a short time a suppression of the expectoration.

2d. We should always make use of a large canula for the sake of permitting free expiration, the only substitute for coughing, which the patient can no longer effect.

3d. The operation of bronchotomy is not in itself unattended with danger; and even slight wounds of the trachea may be fatal from their effect in suppressing the excretion of the mucus of the air-passages. The case which I have just related is a good illustration of the manner in which a slight wound of the trachea may be fatal. The patient, a woman in the vigour of life, most carefully watched and attended to, died in consequence of a slight wound of the crico-thyroid membrane, because the inflammation extended down the windpipe into the bronchi, and was attended with secretion, which could not be expectorated on account of the wound below the glottis.

The same fatal termination had very nearly occurred in a young woman in the Royal Infirmary, a patient of my colleague Dr. Ballingall, during the autumn of last year. She, too, had cut her throat slightly after her delivery of a still-born natural child. The wound was comparatively slight, and required no peculiar treatment; but the inflammation had extended down into the minute branches of the bronchi, and was attended with copious secretion. While the wound was closing, the expectoration became so difficult that suffocation was repeatedly threatened, which was averted, however, by the enlargement of the wound, and the introduction of a large canula.

I remember to have surprised the house-surgeon, Dr. Lubbock, by stating that equal relief would have followed the complete closure of the wound by the thumb or forefinger.

4th. The absence of expectoration may be either very favorable or unfavorable to the performance of bronchotomy. It is a very favorable symptom when it depends on the sound state of the mucous membrane of the bronchi. It is most unfavorable when it depends on such a closure of the rima glottidis that too small a quantity of air can be introduced to effect coughing.—(Dr. Cullen, *Ibid.*)

Stricture of the Lachrymal Duct.—The following is Dupuytren's method of treating this affection:—

The instruments employed in the operation are a common French bistoury, a canula of silver, gold, or platina, and a *porte-canule*, to which the canula is affixed for being more conveniently inserted in the lachrymal passage. The length of the canula is one inch; its upper opening measures one-tenth of an inch; the tube gradually tapers from its upper to its lower opening, the diameter of which measures one-twentieth part of an inch; the lower opening is placed obliquely, and the upper opening is surrounded by a small rim, to prevent its sinking too low into the duct.

The following is the manner in which the operation is performed:—The patient being seated in a chair, rests the head against the breast of an assistant, who fixes the head by a hand placed over the ear and temple on each side. The operator (supposing the left eye to be operated upon) stands in front of the patient, and a little to the left side. With the index finger of the left hand he puts the integuments at the inner angle of the eye upon the stretch, for the purpose of rendering the tendon of the orbicularis palpebrarum more evident, at the same time that the assistant, who holds the head, stretches the integuments at the outer angle of the eye. The lachrymal sac is then to be punctured by the point of the bistoury being inserted immediately below the tendon of the orbicularis palpebrarum. The direction in which the instrument should be inserted is nearly vertical, the handle inclining slightly to the opposite side, and a little forwards, on account of the projection of the eyebrow, the edge of the blade being directed obliquely downwards, or towards a point situated midway between the angle of the mouth and the pinna of the ear, this being the direction which admits of the bistoury being insinuated to the greatest extent down the lachrymal canal. The puncture being made, the bistoury is allowed to remain as a director, and the operator, taking in the left hand the porte-canule armed with the canula, gently insinuates the tube along the side of the bistoury into the lachrymal canal; the bistoury is then withdrawn; slight pressure is made upon the upper part of the canula, so as to cause it to be completely imbedded in the canal. The operation being now completed, the patient is directed to blow through the nose at the time that pressure is made upon the nostrils, by which the tube is freed from any blood that may have accumulated in it, and the air issues out at the incision, showing the free communication that is established between the nostril and the sac.

PHARMACY.

Volatile Oil of Copaiba.—We have lately seen some volatile oil obtained by distillation from copaiba, by Mr. **Battley**, of Fore-street. It agrees in its physical and chemical properties with the oil of turpentine, excepting in its smell, which is somewhat different. There can be but little doubt that on this oil the powers of copaiba as a remedial agent depend; and, if this be the case, the resin of copaiba, concerning which so much has been lately said, can have little or no activity, in consequence of this oil having been driven off. Several trials with the resin have proved the correctness of this inference. The volatile oil of copaiba requires a heat of about 600° F. to obtain it, and is then procured only in a very small quantity.

Preparation of Sulphate of Quinia and Kinic Acid, without the use of Alcohol.—The following is the process of MM. **Henry** and **Plisson**: About two pounds of bark are to be coarsely powdered, and boiled with water, acidulated with sulphuric acid in the usual manner. When the hot liquors are cleared, recently prepared and moist hydrate of lead is to be added until the fluid is neutral, and has acquired a faint yellow colour: this must be done carefully, lest too much hydrate of lead be added. As the decoloration of the decoction is necessary, the liquid, if it remains turbid until the next morning, must have a little more hydrate added, and be refiltered; but the operation is rarely subject to this inconvenience, being usually finished in a few hours. The yellow liquid contains a little kinate of lead, much kinate of lime, kinate of quinia or cinchonia, a little colouring matter, and traces of other substances. The washed deposite consists of colouring matter, combined with oxide of lead, sulphate of lead, and a portion of free quinia; it contains no sub-kinate of lead.

The lead, dissolved in the fluid, is to be separated by a few drops of sulphuric acid, or a small current of sulphuretted hydrogen, and the filtered liquid is to be precipitated by adding caustic lime, previously mixed into a thin paste with water, until the earth is in very slight excess: in this manner the quinia is precipitated. The addition of sulphuric acid readily converts this quinia into sulphate, which may be obtained in very white and silky crystals. The fluid left after the separation of the quinia contains a kinate of lime, almost pure. Being evaporated until of the consistence of syrup, it readily crystallizes in a mass, which may then be purified by recrystallization. The kinate of lime may be precipitated by means of alcohol, and then be crystallized after solution in water or diluted alcohol; or, by adding oxalic acid drop by drop, according to the directions of M. VAUQUELIN, the lime may be separated, and kinic acid obtained. Two-thirds of the quinia or cinchonia in a specimen of bark may be thus separated, and with such facility as to offer a ready test of the presence of these alkalies in any wood or bark submitted to examination. (*Journal of Science*, from the *Ann. de Chimie*.)

Pure Narcotine.—The following process is that practised by Mr. CARPENTER: Digest one ounce of coarsely powdered opium in one pint of ether for ten days, frequently submitting it to ebullition in a water bath; separate the ether, and add fresh portions until the opium is exhausted; place the ethereal solution in a wide-mouthed bottle, and, covering the mouth with bibulous paper, allow the ether to evaporate spontaneously, but slowly: as the fluid diminishes, it leaves the sides of the bottle coated with crystals of narcotine; as the solution becomes more dense, the crystals enlarge and accumulate, and the bottom of the vessel is covered with large transparent crystals, accompanied with a brown viscid liquor and extract, which contains an acid resin, caoutchouc, &c. Separate these substances, and wash the crystals in successive portions of cold ether, to remove the extract; then dissolve them in warm ether, and evaporate slowly as before: beautiful snow-white crystals of pure narcotine will be obtained: those on the sides of the vessel assume plumose and arborescent forms; they enlarge as the solution becomes more concentrated, and the bottom of the bottle becomes covered with pure narcotine, assuming the rhomboidal prismatic form, with some modifications of macled crystals. The crystals towards the bottom are transparent, but the most minute at the top are opaque and snow white. By picking out the largest and most regular crystals, again dissolving and evaporating, and repeating the same process, each time selecting the largest and best crystals, some were obtained the eighth of an inch in diameter, and still larger might be produced by similar operations. (SILLIMAN'S *Journal.*)

INTELLIGENCE.

LIBEL AGAINST THE EDITOR OF THE LONDON MEDICAL AND PHYSICAL JOURNAL.

THIS cause, which has been so long postponed, at length came on in the Court of King's Bench, on Monday, the 18th of February. We shall subjoin an account of the proceedings, taken by a short-hand writer employed for the purpose, and afterwards make a very few remarks.

MACLEOD *v.* WAKLEY,

(Tried before LORD TENTERDEN *and a Special Jury.)*

Mr. **PATTISON** opened the pleadings.

Sir **JAMES SCARLETT** then proceeded to state the case on the part of the plaintiff as follows:—

May it please your Lordship; Gentlemen of the Jury; The plaintiff in this case, Dr. Macleod, is a physician, who for the last ten or twelve years has been practising in this metropolis: he is a gentleman exceedingly well known both by the circle in which he moves as a medical man, and by the public who take an interest in medical subjects, by his having become the editor of a publication that has long had great reputation, called the London Medical and Physical Journal. He was the joint editor with Mr. Bacot up to a certain period, and from that period he became the sole editor. The object of that work is to take notice of such publications of new medical facts as may be interesting to the profession and useful to the public, and also occasionally to make some comments upon new medical information that is derived from public sources, for the purpose of instruction, and informing the profession of what is passing; in short, to record, as it were, the living history of medicine.

Gentlemen, I should inform you, in order to explain the matter of the libel which Dr. Macleod calls on you this day to consider, that he had published, in the month of December 1825, a case of the cure—real or supposed —of a disorder which is called aneurism. [Here the learned Counsel described what aneurism meant, and alluded particularly to Mr. Wardrop's proposal to tie the artery beyond the tumor. He then proceeded:] This certainly has been attempted in one or two instances before, but was supposed to have failed; but Mr. Wardrop having published this case as one of success, it was noticed by Dr. Macleod in terms of very considerable approbation: he begins by stating "This is one of the boldest operations to be found in the records of modern surgery," and the case is "unquestionably very interesting and important." The whole case is then given sufficiently to make anybody understand it, and to draw the public attention to it, occupying a space, I think, of no less than one—two—three pages, nearly three pages and a half of this Journal. That was in the year 1825. In the latter end of 1826, another case occurred, which Mr. Wardrop had published in a work called the Lancet, which is published by the defendant, (I believe he is the proprietor of it also,) of very great circulation: it is published in a very cheap form, being sixpence a number, and it combines with a notice of medical facts a species of humor and satire which, as you all know, render literary performances the more acceptable.

[Here some interruption took place in the Court.]

Gentlemen, I was stating to you a proposition, in which I hope you will agree, that a performance—whether it be of a scientific nature, or of a purely literary nature,—that is seasoned with a portion of satire and of personal allusion, generally speaking, (for what cause I do not pretend to know,—some cause founded in a principle of human nature, I suppose,) has more circulation than any other; and the case of aneurism that had occurred in the following year having been published by Mr. Wakley in the Lancet, had given it sufficient circulation, and there was no occasion for Dr. Macleod, therefore, to notice it. However, in a number of his work published in April 1827, it was noticed by a writer who had made him an original communication, a gentleman (Mr. Travers) who had stated several cases of disorders of arteries, of which this is one, and alluded to this case of Mr. Wardrop; so that it was noticed in that number. But it so happened, before the number went to the press, that the last patient on whom the experiment had been tried by Mr. Wardrop died, and, upon her death, an examination had been made into the particular part where the aneurism had taken place, in order to ascertain the success of the operation; because, although a patient recovering from an operation is undoubtedly, as long as the patient lives, the best evidence you can have of the success of it, yet, as persons do not know the secrets of nature, the most learned anatomist has still something to learn on that subject: it sometimes happens that nature does the work which we ascribe to the artist: and therefore when the lady—I think it was a female—died, on whom the second operation had been performed by Mr. Wardrop, an opportunity being given in the hospital to make a dissection of the particular part, it was thought very important by the surgeons to ascertain whether or not the ligature which he had applied had really been a ligature of the artery, or of some other membrane.

Now, I should inform you that it is a known fact among medical men, that where the artery is completely tied, so as to prevent all communication of the blood from one side to the other by the ligature, that the effect of it is (and that is the object of the cure in aneurism,) to cut it off as it were,—the effect is to obliterate altogether the artery, so that the two extremities become sacs, as it were, at each end, and there is no communication of the blood from one to the other: if any connexion remains between them, and that connexion is pervious so that an instrument can pass through it, that is a proof that the ligature has not been complete, and has not been put there. On the dissection of this part of the frame of the patient, who was supposed to have recovered of the aneurism, but was still a patient in the hospital, it was completely ascertained that, in point of fact, the artery, where the supposed ligature had taken place, was in a perfect state—was pervious, and therefore the blood had flowed through it from the heart to the head just as before: consequently, that the cure must have taken place from some other cause,—either by nature or from some other cause, but not from this attempt. Now this was a fact so important, being an original fact, that Dr. Macleod thought it right—that it was his duty, to communicate this to the public, and he does so in this number, and in this form. You see the article from Mr. Travers had appeared in the body of the work; before it went to the press, this fact being ascertained, and Mr. Travers having spoken in commendation of the supposed new practice, relying on this case and the former case, this notice is taken by Dr. Macleod of the event that I have just now described to you:—"Dissection of one of the cases of aneurism in which the carotid artery was supposed to have been tied beyond the tumor.—Our readers are probably aware that it was proposed by Dessault to tie the artery, in certain cases of aneurism, beyond the tumor, and that this operation was actually performed by Deschamps and Sir Astley Cooper, but, proving unsuccessful with them, never became generally adopted. Allusion is made in the present number of the Journal to Mr. Wardrop's attempt to revive this method of operating, and we therefore think it right to make our readers acquainted with the state of parts as discovered on the post-mortem examination of one of the recent cases. The patient alluded to died last week, and the body was examined on the 23d, when it was found that the carotid artery was pervious and undisturbed, presenting one continuous tube throughout, there being no unusual appearance and no aneurism. The heart was affected with hypertrophy;" of which the patient, I fancy, died. "Mr. Travers, with reference to the alleged success of this method, remarks (page 331,) that it will be of much importance, 'if borne out by similar results,' and we have given the above details because it is obviously of great importance that surgeons should be able to form a true estimate of the value of any proposed method of treatment as soon as possible, that it may either be rejected or adopted according to circumstances. We are quite aware that mistakes will sometimes happen even in the hands of skilful surgeons, and it is this consideration which has induced us to withhold numerous other instances of unfortunate operations, which have been transmitted to us for the purpose of publication, because they have not, like the present case, been connected with any important practical question."

Now, there is no doubt that the question was of very great practical importance to all surgeons, seeing there was one case that was supposed to be successful, and another case that had also been supposed to be successful, but on dissection had turned out not to be the case supposed,—it was very important that they should inquire into the demonstration of the fact presented, in order to ascertain what sort of reliance might be placed on the recommended operation; because there is no doubt the operation is very dangerous in its nature: the experiment is hazardous, and, unless the cases were multiplied on each other, and should present a tolerable ground of success, it would be hazardous to attempt it in any particular case.

Gentlemen, this is the whole that Dr. Macleod has done, and you will judge whether he has deserved the attack made on him by the author of the Lancet. Dr. Macleod publishes his Journal in this form, with a yellow leaf, you see, by which the author of the Lancet thinks fit afterwards to distinguish him. In the month of May, 1827, the very following month after this April publication, comes this passage on Dr. Macleod: "We must again return"—Now, you see he may be said to be in some degree—although I do not believe that he does so consider himself,—in some degree as a rival editor: rivals may at least treat each other with civility; there is no occasion to be personally rude when they enter into an honourable course of emulation; they may both serve the public. What is the character of the Lancet I do not pretend to know, but the title he assumes, I believe, is understood generally to signify that he is a great *scarifier;* and therefore the Lancet is the title of the work adopted by him for the express purpose of showing that he means to use the lancet rather freely in his commentaries, as well as his surgical operations.—"We must again return to the April number, for the purpose of noticing two papers which refer to the recent operations for the cure of carotid aneurism by tying the vessels beyond the tumor." He then takes notice of the first case of Mr. Wardrop, which was published in November 1825, as I have told you, by Dr. Macleod. He says this, "the first case successfully treated after this method was published by Mr. Wardrop in Part 1st, Volume 13, of the Medico-Chirurgical Transactions, on the 5th of July, 1825, and was copied into the Lancet of December the 31st, 1825. The second case treated by Mr. Wardrop appeared originally in the Lancet, December the 23d, 1826. The third case, treated by Mr. Lambert, was published in this Journal of March the 24th, 1827; during the whole of which period not one word has been said of these most important operations in the yellow Journal, by that exceedingly sagacious, active, and intelligent editor, Roderick Macleod."

We shall see, by and by, whether he means to use these words, which are complimentary, in an ironical sense or not. "But, on the 23d of March, the subject of Mr. Wardrop's second operation having died from an enormous hypertrophy of the heart, Roderick, in his April number, presents his readers with his first notice of either of these operations in the following account of what he calls the 'dissection' of the body. This account we will here insert, italics, capitals, and all; in fact, without altering either word or letter."

Now here he begins to inform his readers *of what he must have known was a direct and positive falsehood.* You see his object is to show that Dr. Macleod, being the editor of a Medical Journal, conducts himself with partiality and injustice, for that he omits to notice a successful case of an operation; but that, when he has discovered an unsuccessful case, he then maliciously publishes it. I have read to you the publication of Dr. Macleod, in the number of the year 1825, *which was actually antecedent to the notice taken of it by the Lancet, according to his own account* If this gentleman reviews the works of other people, he is bound to read them—I mean in point of morality. I believe he may justify himself by many other reviewers, who review works they have not read. I do remember, not very long ago, a very celebrated reviewer having reviewed a work of Mr. Buckingham's—his Travels into Asia Minor, and it was quite clear the reviewer had so misrepresented certain material facts stated, and which he said he had borrowed from the book, that he either had not read the work, or, having read it, he had falsified the statement in his review. One of two things must be charged on the author of the Lancet,—either he is deceiving his readers, by informing them he reads others' works on which he makes comments, or, having read these works, he states a deliberate falsehood, for the purpose of calumniating the author! Then he goes on,—"Now we really think that Roderick will be most heartily despised when we come to explain the matter a little, and when we reflect on what is his duty as a medical journalist." You know the old saying: we all of us can see our neighbour's faults, but our own are in a wallet behind our backs. This medical journalist is going to tax another for a fault of which he himself happens to be guilty. "Mr. Wardrop's first operation was read to the Medico-Chirurgical Society, July the 25th, 1825; his second operation published in December 1826; and Mr. Lambert's in the Lancet of March the 4th, 1827; yet, during the whole of this protracted period, Roderick keeps his readers in perfect ignorance of these most important and invaluable additions to our stock of surgical information; but no sooner does one of these patients die of another disease than this precious Macleod (or gentlemanly Macleod, as we one day heard a Scotch blockhead call him,) brings out the above history of the dissection, from which it is impossible to understand whether he wishes to convey to his readers an impression that it refers to the first, second, or third case."

Now that is a gross misstatement, because he speaks of it as one of the *recent* cases mentioned by Mr. Travers, who in the body of the work had alluded to that case.—"His reason for publishing this paper on the 1st of April, 1827, it appears is 'because it is obviously of great importance that surgeons should be able to form a true estimate of the value of any proposed method of treatment as soon as possible.' Indeed, Roderick! if you consider this a sound maxim, why did you not allude to Mr. Wardrop's successful case of 1825, until April 1827, in which time you had ejected some two dozen or more of your yellow funguses, without marking upon either of them the slightest notice of this most important improvement in surgery, which, according to yourself, should be known 'as soon as possible.' *There is a something in this conduct far too detestable to be adequately described in print.*" You will have a description of it by and by in another way.—"Such conduct as one would scarcely expect from a 'gentlemanly editor,' who is anxious that his readers should be made acquainted with pathological facts 'as soon as possible;' but it is what we should anticipate from an editor who places all his reliance for support on the corrupt patronage of hospital surgeons, and who *appears to hate, mortally hate, not only general practitioners, but all those 'factious and disaffected persons' who have espoused their cause;* and it is well known that Mr. Wardrop is one of those persons."

I beg your attention now, gentlemen, for a moment to this: what a serious charge it is to make on a professional man, that he hates general practitioners. The author of the Lancet knows as well as any man to whom he addresses this charge. A medical man, like men in every other profession, depends on his reputation, and very often for his success in life on the kind feelings and the good opinions of the members of his own profession; and to publish of him that he hates them generally, or hates any class of them, is undoubtedly published for the purpose of exciting a hostile feeling in the body at large towards the individual, and which is one of the most injurious aspersions that could be made; and Dr. Macleod, among the bitter remarks that have been made on him here, and the ridicule thrown on him, feels more deeply than any thing else that attack: one so utterly unfounded and untrue, that I cannot but think you will agree with me that every man of feeling and honourable mind must be highly sensible and feel indignant at such an imputation being cast on him.

[The Counsel then proceeded to read the other parts of the libel.]

Now, gentlemen, then, what is the charge?—to say nothing of his calling Dr. Macleod a blockhead—to say nothing of the contempt with which he treats him, speaking of his practice as detestable—speaking of his hatred to the members of his own profession,—looking at that individual charge he makes against him, he says, you, who are a medical journalist, who say it is your duty to make the earliest communication to your profession, have wilfully concealed an important medical surgical discovery, made by Mr. Wardrop, and published by him in 1825,—you have published a dozen numbers since, or two dozen—you pass it over in silence, and then, when one of his recent instances, in your opinion, turned out to be unsuccessful, and the patient died, although she died of another disorder, you have maliciously published that, in order to point out the unsuccessful operation of this gentleman, against whom you have some malice or enmity, after having allowed the other successful cases to sleep for two years.

I cannot conceive a charge more serious than this; and it is made against Dr. Macleod by the author of the Lancet, who has thought fit to publish it *in daring violation both of truth and honesty.*

Then he goes on to state—"His plan, therefore, towards those whom he dislikes seems to be to publish no account of their success, and to fabricate cases of failure as soon as possible." So that he also charges him here with a fabrication—that this case of failure is a fabrication. Now you come to understand it, he does not even state it to be a failure: what he states is this, the patient died of another disorder—both parties agree in that;—all Dr. Macleod published was this, when she died it was thought useful to examine the supposed site of the aneurism, and it was discovered there really had been none: it was another disorder mistaken for it. The artery supposed to have been tied by Mr. Wardrop, had never been tied at all; and therefore some other membrane must have been tied by him, which he had mistaken for the artery, because the artery was found in full play, pervious, and capable of conducting the blood from the heart to the head, as it had done before. He therefore fabricates no case.

Now, Dr. Macleod complains before you, a jury of his country, that, for the purpose of conveying an imputation on his honour,—upon his character as a medical man, and on his science, and on his impartiality and justice as an editor, that the *author of the Lancet has himself fabricated falsehoods—notorious falsehoods, and published them to the world as the foundation of the charge!* What does the author of the Lancet say? He says by his plea "not guilty!" He does not justify—he does not state that he had even any colour for the publication. He leaves you, then, to judge,—he leaves you to judge of his motive in making the publication. Now, what motive can a man have, gentlemen, for publishing that which is notoriously false in order to calumniate another man? Will he say that he was not in the habits of reading this Journal;—why, he makes it a subject of criticism! What right had he to say, if he was not in the habits of reading it, that a publication of Mr. Wardrop's had not taken place in it? Is a man to say to the public, I know such an author has not published in his Journal such a work, and then to say afterwards, "Upon my word, I have not read the Journal, therefore I was mistaken!" Is that an apology? It is an apology *a man of honour would not make,* and a court of justice would not receive. He holds it out here he has read it. To the reader who has not read this work (Dr. Macleod's,) and who has read his work with a conviction that he has discharged his duty as editor, the belief must be that Dr. Macleod has never published this case at all, because he not only wished to suppress the facts which conducted another man to fame, but had fabricated a case of failure, and published a falsehood in order to do him an injury afterwards.

Now, gentlemen, Mr. Wakley, by his plea, does not pretend to say any of the facts he states are true; and, consequently, if you think them libellous,—(and I think, gentlemen, I should insult your understandings by supposing you could doubt for a moment they are,) the only question is, what estimate you will give, by your damages, of the nature of this libel. Or he will say, perhaps, it was not malicious,—very likely my friend, Mr. Brougham, will say otherwise alarming. She was slightly delirious, always on the subject of her domestic grievance; the pulse was small and feeble; her face was rather flushed; the tongue was white and tremulous when protruded; and the countenance had a peculiar expression of anxiety and suffering. By means of a proper bandage, the head was bent down upon the sternum, so as to close the orifice in the crico-thyroid membrane, upon which a simple pledget was applied, no other dressing being thought necessary, as it was determined to let the wound heal slowly, in its own way, by granulation.

The head symptoms seemed much more urgent; inflammation of the arachnoid membrane was suspected, a disease which I have uniformly found most difficult of cure. When depending on mental distress, it is a complaint often fatal, particularly when, occurring in those who have attempted their lives, it is treated too actively by blood-letting. I contented myself, therefore, with desiring that the patient should have her head shaved, and that ice should be applied to it; that she should occasionally have a small quantity of wine-and-water, if she seemed disposed to sink; that a brisk cathartic should be given; and that she should be removed to a darkened chamber, where she could be kept cool and perfectly quiet.

These measures appeared to have a very salutary effect. At seven P.M. she was more composed; the expression of the countenance was improved; the dressings were displaced, and she breathed fully from the external orifice. The wine was ordered to be stopped, and the ice to be regularly continued.

The next morning, she was reported to have passed a quiet but sleepless night. The pulse was firmer than before. She had some cough, or rather violent expirations in place of cough, unaccompanied by sputum of any kind.

In the evening, the delirium seemed to have increased, with tendency to noise and violence. The respiratory symptoms were the same as before. Ten leeches were ordered to be applied to the forehead and temples.

Next morning, she was rather better; the cough, however, was somewhat increased, and she had slight expectoration of viscid clear transparent mucus. This expectoration was brought up with great difficulty. It was expelled through the wound, not by coughing, strictly so called, but by expiration merely; and that with so little force, that it had to be pulled out of the wound by the fingers of the patient or the nurse. A mucilaginous antimonial mixture was ordered.

In the evening, the symptoms were much the same as in the morning; the expectoration rather more copious; and the stethoscope detected acute inflammation in the smaller branches of the bronchi. A large blister was applied to the sternum, as the state of the intellectual functions and constitutional powers seemed to forbid the use of the lancet.

Next morning the patient was thrown into considerable agitation by a visit from her husband. She was very delirious at the visit at noon. The sputum was more copious, and still got rid of with much difficulty. She was ordered an anodyne draught, which procured a few hours' quiet repose, and soothed her excited imagination. I was in hopes, therefore, that the patient was to do well, as she had no threatening symptoms referable to the chest, and as the head symptoms were comparatively moderate and manageable.

Next morning, however, at five o'clock, Dr. Lubbock, the house-surgeon, to whom I am much indebted for his assistance in the management of the case, was suddenly roused from his bed, as the patient was reported to be dying. He found her on the point of suffocation, breathing very hurriedly with great difficulty, with the death rattle in her throat, livid face, and cold extremities. She was unable to expectorate. Dr. Lubbock immediately introduced a large curved canula into the wound, through which the patient was enabled to take a full inspiration. The effect of the introduction of the instrument was, that the breathing became much easier; and, as the alarming symptoms evidently arose from the accumulation of mucus in the bronchi, she was strongly recommended to cough as much as she could. By degrees she was enabled to bring up mucus through the canula, not, however, by coughing, but simply by expiration, which, as the canula was of large size, she could perform with considerable force.

In the course of a short time, as the expectoration became more free, the alarming symptoms subsided; the rattle in the throat was no longer heard, the breathing became easy, and the expression of the countenance very greatly improved.

Having been thus apparently rescued from the very jaws of death, she was left under the care of the nurse, who was directed to request her from time to time to make attempts at coughing. At noon, when I paid her a visit along with Dr. Lubbock, I found her very nearly in the same state from which she had been recovered with so much difficulty in the morning. The canula had slipped out of the trachea; the extremities were cold, the lips livid, the pulse hardly perceptible; the respirations rare, difficult, and accompanied with a frightful rattle in the bronchi; no expectoration; no attempt at coughing; and a great degree of stupor. In a loud tone of voice I desired her to cough, *but she could not make the attempt*. To enable her to expectorate, to allow her to cough, I placed my thumb on the orifice of the crico-thyroid membrane, so that she breathed entirely by the glottis much more freely than she had done before through the artificial opening.

When the respiration was a little improved, I requested her to cough. She could now do so readily enough, and brought up some very tenacious mucus, by the excretion of which the respiration was still further improved.

In the course of about a quarter of an hour, in consequence of the free expectoration, the breathing became quite easy; the expression of the countenance improved; and the lips regained nearly their natural hue. I directed a dresser to remain constantly with the patient, to keep the crico-thyroid membrane closed with his thumb, and to direct her to make attempts at coughing from time to time, and, if she refused, to tickle the epiglottis with a feather. For about an hour and a half the patient complied with the directions given her, and coughed up a considerable quantity of mucus; but by degrees she became more and more insensible, and would not cough; titillation of the epiglottis produced no effect; the mucus accumulated in the bronchi, and she died of suffocation about four o'clock.

Sectio cadaveris, twenty-one hours after death.—Upon opening the cranium, the vessels were found much more numerous than usual, more highly injected, especially on the surface of the right hemisphere. There was a good deal of serum in the subarachnoid cellular tissue, but the serous surface of the membrane was perfectly natural.

The substance of the brain was more vascular than usual, but not inflamed, softened, or otherwise disorganised. There was a considerable quantity of serum in the interior of the ventricles; a large quantity also at the basis of the brain, where likewise the membranes were much more vascular than usual, particularly on the tuber annulare.

Upon opening the chest, the pleura was found in a perfectly natural state. The bronchi, particularly the left, were obstructed with bloody mucus. There was a small quantity in the trachea. The lungs were every where soft, crepitating, elastic, and only a little more vascular than usual.

In the neighbourhood of the wound, the mucous membrane of the larynx was inflamed, and red from increased vascularity, but it was not thickened. There was no effusion of fluid into the submucous cellular tissue, and consequently no diminution in the diameter of the glottis. Immediately at the edge of the wound, there was a slight effusion of lymph. The membrane of the trachea and that of the bronchi were inflamed and highly vascular, not thickened, but perhaps a little softer than natural; and it seemed as if the inflammation had spread down the air-passages, into the minute branches of the bronchi.

This case illustrates in a very forcible manner the truth of some observations on bronchotomy, published in the Number of this Journal for July last. I took occasion in that paper to call the attention of the profession to the physiology of coughing, and to the danger which necessarily attends on a copious secretion of mucus from the bronchi when an opening has been made in the trachea. For, to produce full and vigorous coughing, so as to clear the minute branches of the bronchi of their fluid secretion, the expiratory muscles must for a certain time act in opposition to the constrictor muscles of the glottis. When by this antagonism the former have acquired sufficient force, the latter are suddenly relaxed, and in the moment of their relaxation coughing takes place, and mucus or pus is expectorated along with the air thus violently expelled; but, when an opening is made into the trachea, expectoration immediately becomes difficult, for the expiratory muscles have no longer their antagonist constrictors of the glottis to act against. They cannot therefore acquire sufficient force to produce that strong current of air which is at least highly favorable to expectoration. A patient, therefore, after bronchotomy, cannot perform the act of coughing, properly so called. He can only expire with a force proportioned to the quantity of air he can take into the lungs.

The truth of these observations is borne out by what I have noticed in all the cases in which I have seen bronchotomy performed. I have uniformly observed that expectoration immediately became difficult after the operation. The patient could not drive the expectorated matter through the canula, for the current of air was too weak; and hence I have seen death ensue from a small quantity of blood getting into the trachea.

It was my thorough conviction of this truth that made me close the external wound entirely, when I found the patient on the point of suffocation. The effect of the closure was, that the muscles of the glottis were called into play; the patient was enabled to cough, and consequently to expectorate, so as to get rid of the mucus which obstructed the bronchi: she, however, had a few hours before derived equal relief from a directly opposite practice,—viz. the introduction of a canula into the wound; and the alarming symptoms had recurred only because the instrument had been displaced. This fact admits of a very satisfactory explanation. A full inspiration is favorable to expectoration, and the force of the expiratory muscles is in proportion to the quantity of air inhaled. The wound in the patient's throat, never very large, was considerably diminished by the swelling of the surrounding parts; she could not therefore take in a large quantity of air, while, on the other hand, she had lost the use of the constrictor muscles of the glottis; and therefore her expectoration was difficult, or rather impossible. But when a large canula was introduced, she could take in a large volume of air, on which the expiratory muscles could act with such force as to produce expectoration. Both practices, therefore, though diametrically opposed to each other, were perfectly judicious under the circumstances of the case; but on far different grounds. The closure of the external orifice allowed the muscles of the glottis to act, and genuine coughing to take place; by the introduction of a wide canula, a large quantity of air found admission to the lungs, which is to a certain degree a substitute for proper coughing.

These considerations lead to some important practical views, and enable us to explain the fatal termination of many of the recorded cases of bronchotomy. In the first place, the canula employed ought always to be large. If it be small, the breathing will be difficult. During the inspiration, blood will be sucked into the trachea from the edges of the wound, and a quantity of air sufficient for the purposes of respiration will not be admitted to the lungs. Secondly, when inflammation exists in the minute branches of the bronchi, attended with plentiful secretion, the introduction of a large quantity of air is absolutely necessary for expectoration. A small quantity of air cannot acquire sufficient force to bring up along with it the secretions of the bronchi. We can explain on the same principle why bronchotomy is so rarely successful when diseases have extended into the minute branches of the bronchi. After the operation the expectoration becomes more difficult, from the constrictor muscles of the glottis being rendered useless. Mucus accumulates more and more down the air-passages, and the patient dies gradually suffocated.

In severe cases of inflammation of the lungs, the expectoration is commonly suppressed a short time previous to death, but it does not cease to be secreted, it is only not excreted; for, in proportion as more and more of the lungs becomes useless for the purposes of respiration, of course a less quantity of air can be introduced at each inspiration, till at last the quantity is insufficient for a forcible inspiration or coughing; then, of course, the minute branches of the bronchi continue loaded, and the patient is suffocated. These observations on the influence of bronchotomy on coughing and expectoration were partially laid before the profession in the Number of this Journal for July last; but the paper was too concise, and was misunderstood, particularly by the editor of the London Medico-Chirurgical Review. That gentleman may depend upon it that it is not wrong to say that a patient with a tube in the trachea can most commonly only produce a current of air too weak for the purposes of expectoration. I have never seen a patient expectorate matter through the canula with any thing like freedom. It has been always necessary to extract the tenacious mucus by probes and other mechanical means. There has been uniformly a want of expiratory power, which the constrictors of the glottis alone could have supplied. My professional friends have assured me that their experience has been of the same kind: they have witnessed the same difficulty of expectoration. The editor, likewise, as an argument against the truth of my views, objects that, in the case formerly published, I had distinctly stated that, on the first introduction of the tube, a fit of coughing supervened, attended, to my great surprise, with expectoration of semitransparent viscid mucus. I was certainly surprised, because I had no reason to believe that any mucus was secreted by the bronchi; but the expectoration of it immediately after the introduction of the tube is not only not in opposition, but very strictly in accordance with my views of the physiology of the windpipe. The patient had laboured under laryngitis, by which the size of the rima glottidis had been so far diminished that a very small quantity of air could be introduced at each inspiration,—too little, indeed, for proper coughing. But as soon as an opening was made in the crico-thyroid membrane, and a large canula introduced, then the patient could breathe freely, and, though she could not cough, properly speaking, she could expire with considerable force, and thus get rid of a quantity of mucus in the way of expectoration.

From the foregoing statements I would draw the following practical conclusions:—

1st. Bronchotomy should not be performed in cases where inflammation and copious secretion exist in the minute branches of the bronchi,—at least such cases are most likely to terminate unfavorably. The operation, if performed, may relieve the breathing for a while, but it may occasion in a short time a suppression of the expectoration.

2d. We should always make use of a large canula for the sake of permitting free expiration, the only substitute for coughing, which the patient can no longer effect.

3d. The operation of bronchotomy is not in itself unattended with danger; and even slight wounds of the trachea may be fatal from their effect in suppressing the excretion of the mucus of the air-passages. The case which I have just related is a good illustration of the manner in which a slight wound of the trachea may be fatal. The patient, a woman in the vigour of life, most carefully watched and attended to, died in consequence of a slight wound of the crico-thyroid membrane, because the inflammation extended down the windpipe into the bronchi, and was attended with secretion, which could not be expectorated on account of the wound below the glottis.

The same fatal termination had very nearly occurred in a young woman in the Royal Infirmary, a patient of my colleague Dr. Ballingall, during the autumn of last year. She, too, had cut her throat slightly after her delivery of a still-born natural child. The wound was comparatively slight, and required no peculiar treatment; but the inflammation had extended down into the minute branches of the bronchi, and was attended with copious secretion. While the wound was closing, the expectoration became so difficult that suffocation was repeatedly threatened, which was averted, however, by the enlargement of the wound, and the introduction of a large canula.

I remember to have surprised the house-surgeon, Dr. Lubbock, by stating that equal relief would have followed the complete closure of the wound by the thumb or forefinger.

4th. The absence of expectoration may be either very favorable or unfavorable to the performance of bronchotomy. It is a very favorable symptom when it depends on the sound state of the mucous membrane of the bronchi. It is most unfavorable when it depends on such a closure of the rima glottidis that too small a quantity of air can be introduced to effect coughing.—(Dr. Cullen, *Ibid.)*

Stricture of the Lachrymal Duct.—The following is Dupuytren's method of treating this affection:—

The instruments employed in the operation are a common French bistoury, a canula of silver, gold, or platina, and a *porte-canule*, to which the canula is affixed for being more conveniently inserted in the lachrymal passage. The length of the canula is one inch; its upper opening measures one-tenth of an inch; the tube gradually tapers from its upper to its lower opening, the diameter of which measures one-twentieth part of an inch; the lower opening is placed obliquely, and the upper opening is surrounded by a small rim, to prevent its sinking too low into the duct.

The following is the manner in which the operation is performed:—The patient being seated in a chair, rests the head against the breast of an assistant, who fixes the head by a hand placed over the ear and temple on each side. The operator (supposing the left eye to be operated upon) stands in front of the patient, and a little to the left side. With the index finger of the left hand he puts the integuments at the inner angle of the eye upon the stretch, for the purpose of rendering the tendon of the orbicularis palpebrarum more evident, at the same time that the assistant, who holds the head, stretches the integuments at the outer angle of the eye. The lachrymal sac is then to be punctured by the point of the bistoury being inserted immediately below the tendon of the orbicularis palpebrarum. The direction in which the instrument should be inserted is nearly vertical, the handle inclining slightly to the opposite side, and a little forwards, on account of the projection of the eyebrow, the edge of the blade being directed obliquely downwards, or towards a point situated midway between the angle of the mouth and the pinna of the ear, this being the direction which admits of the bistoury being insinuated to the greatest extent down the lachrymal canal. The puncture being made, the bistoury is allowed to remain as a director, and the operator, taking in the left hand the porte-canule armed with the canula, gently insinuates the tube along the side of the bistoury into the lachrymal canal; the bistoury is then withdrawn; slight pressure is made upon the upper part of the canula, so as to cause it to be completely imbedded in the canal. The operation being now completed, the patient is directed to blow through the nose at the time that pressure is made upon the nostrils, by which the tube is freed from any blood that may have accumulated in it, and the air issues out at the incision, showing the free communication that is established between the nostril and the sac.

PHARMACY.

Volatile Oil of Copaiba.—We have lately seen some volatile oil obtained by distillation from copaiba, by Mr. Battley, of Fore-street. It agrees in its physical and chemical properties with the oil of turpentine, excepting in its smell, which is somewhat different. There can be but little doubt that on this oil the powers of copaiba as a remedial agent depend; and, if this be the case, the resin of copaiba, concerning which so much has been lately said, can have little or no activity, in consequence of this oil having been driven off. Several trials with the resin have proved the correctness of this inference. The volatile oil of copaiba requires a heat of about 600° F. to obtain it, and is then procured only in a very small quantity.

Preparation of Sulphate of Quinia and Kinic Acid, without the use of Alcohol.—The following is the process of MM. Henry and Plisson: About two pounds of bark are to be coarsely powdered, and boiled with water, acidulated with sulphuric acid in the usual manner. When the hot liquors are cleared, recently prepared and moist hydrate of lead is to be added until the fluid is neutral, and has acquired a faint yellow colour: this must be done carefully, lest too much hydrate of lead be added. As the decoloration of the decoction is necessary, the liquid, if it remains turbid until the next morning, must have a little more hydrate added, and be refiltered; but the operation is rarely subject to this inconvenience, being usually finished in a few hours. The yellow liquid contains a little kinate of lead, much kinate of lime, kinate of quinia or cinchonia, a little colouring matter, and traces of other substances. The washed deposite consists of colouring matter, combined with oxide of lead, sulphate of lead, and a portion of free quinia; it contains no sub-kinate of lead.

The lead, dissolved in the fluid, is to be separated by a few drops of sulphuric acid, or a small current of sulphuretted hydrogen, and the filtered liquid is to be precipitated by adding caustic lime, previously mixed into a thin paste with water, until the earth is in very slight excess: in this manner the quinia is precipitated. The addition of sulphuric acid readily converts this quinia into sulphate, which may be obtained in very white and silky crystals. The fluid left after the separation of the quinia contains a kinate of lime, almost pure. Being evaporated until of the consistence of syrup, it readily crystallizes in a mass, which may then be purified by recrystallization. The kinate of lime may be precipitated by means of alcohol, and then be crystallized after solution in water or diluted alcohol; or, by adding oxalic acid drop by drop, according to the directions of M. VAUQUELIN, the lime may be separated, and kinic acid obtained. Two-thirds of the quinia or cinchonia in a specimen of bark may be thus separated, and with such facility as to offer a ready test of the presence of these alkalies in any wood or bark submitted to examination. (*Journal of Science*, from the *Ann. de Chimie.*)

Pure Narcotine.—The following process is that practised by Mr. CARPENTER: Digest one ounce of coarsely powdered opium in one pint of ether for ten days, frequently submitting it to ebullition in a water bath; separate the ether, and add fresh portions until the opium is exhausted; place the ethereal solution in a wide-mouthed bottle, and, covering the mouth with bibulous paper, allow the ether to evaporate spontaneously, but slowly: as the fluid diminishes, it leaves the sides of the bottle coated with crystals of narcotine; as the solution becomes more dense, the crystals enlarge and accumulate, and the bottom of the vessel is covered with large transparent crystals, accompanied with a brown viscid liquor and extract, which contains an acid resin, caoutchouc, &c. Separate these substances, and wash the crystals in successive portions of cold ether, to remove the extract; then dissolve them in warm ether, and evaporate slowly as before: beautiful snow-white crystals of pure narcotine will be obtained: those on the sides of the vessel assume plumose and arborescent forms; they enlarge as the solution becomes more concentrated, and the bottom of the bottle becomes covered with pure narcotine, assuming the rhomboidal prismatic form, with some modifications of macled crystals. The crystals towards the bottom are transparent, but the most minute at the top are opaque and snow white. By picking out the largest and most regular crystals, again dissolving and evaporating, and repeating the same process, each time selecting the largest and best crystals, some were obtained the eighth of an inch in diameter, and still larger might be produced by similar operations. (SILLIMAN's *Journal.*)

INTELLIGENCE.

LIBEL AGAINST THE EDITOR OF THE LONDON MEDICAL AND PHYSICAL JOURNAL.

This cause, which has been so long postponed, at length came on in the Court of King's Bench, on Monday, the 18th of February. We shall subjoin an account of the proceedings, taken by a short-hand writer employed for the purpose, and afterwards make a very few remarks.

MACLEOD *v.* WAKLEY,

(Tried before LORD TENTERDEN *and a Special Jury.)*

Mr. PATTISON opened the pleadings.

Sir JAMES SCARLETT then proceeded to state the case on the part of the plaintiff as follows:—

May it please your Lordship; Gentlemen of the Jury; The plaintiff in this case, Dr. Macleod, is a physician, who for the last ten or twelve years has been practising in this metropolis: he is a gentleman exceedingly well known both by the circle in which he moves as a medical man, and by the public who take an interest in medical subjects, by his having become the editor of a publication that has long had great reputation, called the London Medical and Physical Journal. He was the joint editor with Mr. Bacot up to a certain period, and from that period he became the sole editor. The object of that work is to take notice of such publications of new medical facts as may be interesting to the profession and useful to the public, and also occasionally to make some comments upon new medical information that is derived from public sources, for the purpose of instruction, and informing the profession of what is passing; in short, to record, as it were, the living history of medicine.

Gentlemen, I should inform you, in order to explain the matter of the libel which Dr. Macleod calls on you this day to consider, that he had published, in the month of December 1825, a case of the cure—real or supposed —of a disorder which is called aneurism. [Here the learned Counsel described what aneurism meant, and alluded particularly to Mr. Wardrop's proposal to tie the artery beyond the tumor. He then proceeded:] This certainly has been attempted in one or two instances before, but was supposed to have failed; but Mr. Wardrop having published this case as one of success, it was noticed by Dr. Macleod in terms of very considerable approbation: he begins by stating "This is one of the boldest operations to be found in the records of modern surgery," and the case is "unquestionably very interesting and important." The whole case is then given sufficiently to make anybody understand it, and to draw the public attention to it, occupying a space, I think, of no less than one—two—three pages, nearly three pages and a half of this Journal. That was in the year 1825. In the latter end of 1826, another case occurred, which Mr. Wardrop had published in a work called the Lancet, which is published by the defendant, (I believe he is the proprietor of it also,) of very great circulation: it is published in a very cheap form, being sixpence a number, and it combines with a notice of medical facts a species of humor and satire which, as you all know, render literary performances the more acceptable.

[Here some interruption took place in the Court.]

Gentlemen, I was stating to you a proposition, in which I hope you will agree, that a performance—whether it be of a scientific nature, or of a purely literary nature,—that is seasoned with a portion of satire and of personal allusion, generally speaking, (for what cause I do not pretend to know,—some cause founded in a principle of human nature, I suppose,) has more circulation than any other; and the case of aneurism that had occurred in the following year do not deny it. I do not at all deny that before the time when Dr. Macleod had published the account of the unsuccessful operation,—I do not deny at all, before that time, there had appeared an account in Dr. Macleod's publication of the other operation. I do not at all deny that: but my friend says that this must have been known to Mr. Wakley; and that he knowingly and wilfully published what he must have known to be an untruth, for the spiteful purpose of charging Dr. Macleod with a knowing and wilful omission. That is the charge against him. I shall shew you that is not grounded in truth. Is it to be conceived that any man would write in the plain undisguised terms which are used here in the following sentences: "Dr. Macleod is a disingenuous person, has duplicity as an editor, is an unfair controversialist, is an uncandid disputant in the medical arena, because he suppresses in his publication all mention of the cases before the other day, and then only gives the following case, and does not publish the successful cases." Is it to be believed that a man, be he ever so spiteful, unless he was deranged as well as spiteful; unless, instead of being the enraged physician, he was fitter for being the patient of a sane physician; unless he was absolutely a madman; would he have ever published to the world what he must know every human being who read the Lancet must have been aware was untrue, and which, therefore, could only injure himself, and not his supposed antagonist, the other rival editor, Dr. Macleod? If, I say, "A. B. went privately and did so and so," or "A. B. privately suppressed his knowledge of a fact;" a steward, for instance, suppressed his knowledge of certain gains coming to his master, or certain facts which his master ought to have known, that is a very slanderous, that is a very evil insinuation, if it turns out to be false; because I may deceive the whole world when I say it, and I may take my chance of the world not knowing the fact, being a private and not a public thing I am speaking of: but if, I say, "A. B. the man in question, who publishes a monthly magazine, or paper, or medical journal, and in that journal he never has mentioned such a thing; in that public journal, and in that public manner, he says he has suppressed the thing, "he has never from that time to this published a word of such a case:" good God! I must believe what I say to do so, because it is a public matter; it is of notoriety, and every man who reads that Journal, and reads this publication respecting the Journal, must be at once able to contradict me, and, instead of injuring Dr. Macleod, I am only offering an injury to myself, either for inaccuracy or falsehood, one way or the other. Observe what my friend admits, very fairly: says he, "the Medical Journal, and the Lancet, are addressed to the same medical public, and are read," says he, "by the same parties." No doubt! that is just what I say; that is my argument; they are read by the same parties: the man who reads the Medical Journal once a month, reads the Lancet once a week; and Mr. Wakley knew that just as well as my friend, and just as well as Dr. Macleod: and when Mr. Wakley publishes this, in which he charges Dr. Macleod with never having published faithfully, in good time, the account he afterwards published; that, publishing the failing case, he never published the successful case; he knew he was addressing people who did not read the Lancet without the Journal; but he was addressing, according to my friend's own admission, the very selfsame class of readers who read the Journal, and must at once have been able to satisfy themselves he was in the wrong, if wrong it was. It is inconsistent: no man will suppose Mr. Wakley did not thoroughly believe what he said: what can be more easy to account for his not knowing it? what can be more easy? Observe this book; the Medical Journal comes out in numbers; observe that: my lord has decided I cannot go to another part of this article as part of my friend's evidence; consequently I have not gone to another part, and I confine myself strictly to this: but my friend has given evidence which clearly shews that, in treating of papers which you see appear in the transactions of learned bodies, large volumes, each volume furnishing matter of much comment, that they continue the article from one number to another, for he has given that evidence; it was part of his averment in one of the counts of his declaration: the leading count, that he continued the article in question, the

April article, from one number to another. Is it not very likely the December article was continued from number to number? Is it not very possible one number might have been read, and one number might have escaped Mr. Wakley? Is it not exceedingly likely at the time he wrote this, and said the Doctor has never published an account of this at all, that the fact was, he had not seen the Number in which he had published the account? May not a man see one Number and not another? May he not, when he finds the first Number he has ever seen not mentioning it, he having been looking out for it, but a Number having escaped him, and missed him, in which the thing was, he sees, time after time, paper after paper, in that book, the review of those Transactions, but never any mention of this; that one, in which it is mentioned, escaped him; and then comes for the first time to his knowledge, for the first time he sees an account, and that is of the operation in which the woman died, and that described in a way which he thinks, right or wrong, is untrue. We have no business to decide between them, the doctors differ, one thinks one, and another another thing; he is angry for his having taken an opposite opinion, and an opposite side of the case, and as he thinks maltreated *his friend Mr. Wardrop*, who made that cure which he, as a medical practitioner, was so partial to. Being prejudiced, and prepossessed by these feelings, he says,—"This is very unfair; this is foul play; this is uncandid; it is duplicity:" whereas, says my friend, he ought to have been more slow to blame. I do not deny it. He ought to have been more sober minded: he ought to have been more cautious before he blamed: he ought to have gone and seen all the numbers, and looked at every page of all the numbers, before he made a charge against Dr. Macleod. I do not deny that—it is incidental to controversy; it is the nature of it; and men, when their minds are heated with religious, medical, or political, or any other controversy, it is very well known that they are apt to lose the Christian in the polemic: those who ought to have the most of that feeling, professionally are known to be, almost proverbially I may say, those who ought always to shew the greatest meekness and candour, have the least. If you will allow such a person to have that proverbial bitter hatred in his compositions, in his controversies, you will also allow a little for a more practical purpose—I won't say more practical; but men, as long as they are men, are apt to feel that more than higher objects, and are very, very likely to indulge in a little of the same haste, and a little of the same animosity: the question is, whether it has gone so far as to amount to a libel? My friend says, he has been held up to ridicule from the beginning to the end. He first says, "the yellow Journal, by that exceedingly sagacious, active, and intelligent editor, Roderick Macleod." This is all wrong; it is a libel, says my friend, to call a man not sagacious, not active, and not intelligent. Then he afterwards talks, in the course of the controversy, of yellow funguses, which are ejected; these are medical allusions, which you and I do not well understand, they are taken from the *materia medica*; the ejectment is very different from the one we know of: they have their ejectings; they talk of ejecting; the body refuses or rejects a thing, and ejects; so, he says, the yellow funguses are ejected: my friend thinks that is also an exceedingly offensive and disrespectful mode of speaking of a respectable antagonist.

Now I hear my friend say he does not care a farthing about that; then what is it he does care a farthing about? I shall go over the different things; and, if he will say "I do not care a farthing" for each as I go over it, we shall probably reduce the bill to nothing in the end. "An editor, who places all his reliance for support on the corrupt patronage of hospital surgeons, and who appears to hate, mortally hate, not only general practitioners, but all these 'factious and disaffected persons.'" Who must have been the man who said these persons were factious and disaffected persons? It is quoted: it is quoted.* Then, somebody else, not Mr. Wakley certainly, but somebody else; whether Dr. Macleod or not is unknown to me; it is somebody with whom he is conflicting, and about whom he is speaking; this is a sort of *argumentum ad hominem*; he throws into his teeth all those "factious and disaffected persons" who have espoused their cause, and it is well known that Mr. Wardrop is one of those persons. Now, my friend says nothing could be worse, because Dr. Macleod is a physician in practice; we are glad to find today, notwithstand what has been written, that he enjoys the same practice he did before, the same lectures as well attended, as the evidence is, as they were before; and he is still the editor of this Journal, notwithstanding the attack on him in his editorial capacity, distinctly so and nothing else: but, says my friend, it is very hard for a practitioner, who depends so much on being in favor with general practitioners, to be held up as hating general practitioners, as, if he had said so of him as Dr. Macleod, if he had said so of him as a private individual, if he had said so of him as a physician, that is a very different case; but it is most carefully guarded from all such imputation—it is most carefully screened and protected, as I shall shew you by the very words made use of, from any possibility of the drawing an inference, or putting a construction on it like this; for he says, it is an editor, not a physician, but it is an editor who places his reliance on such support. Have I not a right, if I am editor of one journal, to say "my rival editor?" and my friend admits it is to be treated as rival editors conflicting on a controversy, "my rival editor looks to such a party." Have I not a right to say "my rival editor looks to such another party, in his capacity of an editor?" It is only in that capacity; he does not say, as a physician, "he hates the general practitioner;" he does not say, as a physician, he hates the surgeons; he does not say, as a physician, he rebels against the college; but he says "an editor who places all his reliance of support,"—on what? Not among patients! Not support, as a physician, in his profession of physician,—"for support in the patronage of so and so." Does not that mean the support to him as editor, by the taking in his Journal? I ask any man of plain common sense and understanding, whether these words are capable of any construction except that? When I say, "a physician places his reliance for support on such practitioners," that is one thing; when I say, "as an editor, he places his reliance for support on those practitioners, it is clear, decidedly clear, that I mean to say, the support of his Journal, as an editor; and I defy any other man, any one who applies his wit, for an instant, to construe the passage otherwise. It is utterly impossible that it can have another meaning.

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* These words are quoted, in the Lancet, in such a manner as to imply that they are Dr. Macleod's. Dr. Macleod never used either these words or any having a similar meaning, as applied to general practitioners.—(EDITOR.)

There are many other observations respecting his editorial conduct; then he says, "for instance, to publish no account of the success." I have explained that already, because he had not seen it before.—"To publish no account of their success, and to fabricate cases of failure as soon as possible." What is meant by fabricate? As I have already shewn, I say that the whole article that precedes these words is a proof; and shews that this gentleman, Mr. Wakley, or whoever it is that writes it, is setting himself to demonstrate that a false conclusion had been drawn, in the page before, from the facts of the unsuccessful case. You will see one after the other, when it is read; as you must perceive if you take it with you and read it; you will find argument after argument, and topic after topic,—replied to; and argument after argument urged,—to shew a false conclusion had been drawn from the facts of that case, for that it had nothing to do with the tying of a ligature to an aneurism, and, therefore, a false construction had been put on it by Dr. Macleod; it was false, in no invidious sense of the word: but he had fabricated a case, he had made it unsuccessful when it was not; fabricated in that sense of the word; and made it appear a case against Mr. Wardrop, when it was not such a case, or rather was one for him. That is the controversy,—God forbid I should call on you to say which was right! Mr. Wardrop may be wrong. Dr. Macleod may be perfectly right. What he means to say, regard being had to the whole of his discourse, is, that Dr. Macleod suppressed the case for some time that was successful: I have shewn you how that was, and that he mis-stated and mis-understood, mis-apprehended and mis-stated, the inferences from the case that was 'supposed' to be unsuccessful."

You are to say whether, taking all the matter here into consideration together, and reminding yourselves also that it is a conflict of those rival editors upon a matter in controversy in the medical world, which they pretend on either side to enlighten; one charges another in a certain way in the conduct of his journal, and in his editorial capacity merely, (for even when he talks of duplicity, it is editorial duplicity, and nothing else;) that he, as the one editor, charges the other editor with certain conduct, simply in the functions of an editor—that is all. Now, he being an editor, comes, like all authors, under the inspection and review of his fellows, rival editors, journalists, reviewers, call them what you will, who from time to time take part in literary politics, or professional controversies, and are accustomed, under the name of discussing and criticising each others' productions, to afford information to the public, or helps to guide the public taste. That the greatest latitude ought to be allowed to persons who so act I not only state as an obvious proposition, dictated by common sense and common reason, and the advantages of which latitude are the result of all and every day's experience, but I have the venerable authority of a most able and learned Chief Justice, who formerly sat in this Court, and who, certainly, I must say, with great humility, and the utmost respect for his memory, cannot, on any account, be accused of too great a leaning towards libellers and towards persons who had exceeded the due bounds within which discussion ought to be confined, and by which the feelings and passions of controversialists ought to be restrained; but my Lord Ellenborough, to whom I refer, was rather one who, from a natural indignation at slander, and every thing that could be termed libel and slander, felt, and from a great regard for the value of character, himself a man of the highest and most unsullied character, and feeling its value, he therefore leant, rather leant against than for those (I think I am putting it very fairly when I say so,) who exceeded those due bounds, and restrained themselves too little in controversy. And yet that learned Judge had the following case brought before him, and directed the Jury in such a way that the Jury found a verdict for the defendant, on the simple ground stated by his lordship, that it was not exceeding the bounds of due criticism; and he referred it to them to say, with a plain indication of his opinion, the bounds of due criticism had not been exceeded. A gentleman had published a book, just as Dr. Macleod edits a book, and publishes in that book which he edits; so had a gentleman, called a Sir John Somebody, it is needless to name his name again, had published a book respecting Ireland; and another person, not in a review, not called for as a reviewer, or by the constant duties of a journalist, as the gentleman who edits the Lancet may be, to give the medical world an account of whatever passes in it; but really, having nothing else to do but to laugh at his fellow authors, this person publishes a book called "My Pocket Book, or Hints for a Ryghte Merrie and Conceited Tour," in quarto, to be called "the Stranger in Ireland." There was a distinct allusion to a book called "The Stranger in Ireland," which that knight had published, and he brought his action; he called two noble persons, who proved they would have bought the book, and many others might have been taken to be in the same situation, if it had not been for this exceedingly ludicrous composition, which was the attack which my friend would call a scarifying, a bitter, ridiculous, and sarcastic attack on that gentleman's production, so that the sale of that book had been injured. So far from the sale of Dr. Macleod's being injured, he is now sole editor, whereas, formerly, he was only joint editor; his employers are more and more satisfied with him, because the book is succeeding better than ever, that you may infer, (the publication was after he had been sole editor,) they have made no change in their arrangement since.

Now you will find, my friend says, "he only should talk of the book, and welcome," says he; but if he talks of the person, there is an end of the case, there is a libel, and you must find a verdict for the plaintiff. What is the case that is reported by a very learned friend of mine, with his usual accuracy, in the first volume of his Nisi Prius Reports—"By a knight errant, (thereby alluding to the said Sir John) and which same libel contained therein certain false, scandalous, malicious, and defamatory things, and, among other things, a print." Now, observe, we have never put a print, we have never turned an editor into ridicule by printing him; printing him we have, but not painting him. What do you think was the prin of Sir John Carr in this book? I wish no advantage to be taken of that, he is a worthy man, his book is an excellent entertaining book, and very useful to persons who go to that part of the United Kingdom, and he was made a knight by his Grace the Lord Lieutenant, very much on account of his literary merit—that I happen to know. This was the malignant and spiteful way in which that author attacked him; he writes a whole book upon him, not an article in a journal; he writes a book with a frontispiece, entitled "The Knight," meaning Sir John, "a Knight leaving Ireland with regret," that is the style of the frontispiece, "and containing and representing in the said print, a false, scandalous, and malicious, defamatory, and ridiculous, representation of the said Sir John, in the form of a man of ludicrous and ridiculous appearance, following the said representation of the said Sir John, and representing a man." This is the caricature, and it is so graphically described by the draughtsman who drew the declaration, I am sure his brother painter who drew the picture could not have brought the image better before you. "Loaded with, and bending under the weight of three large books, one of them having the word 'Baltic' printed on the back thereof"—that was a book, on the Baltic, Sir John had published; "and a pocket-handkerchief appearing to be held in one of the hands of the said representation of a man, and the corners thereof appearing to be held or tied together, as if containing something therein, with the printed word 'wardrobe' depending therefrom; thereby falsely, scandalously, and maliciously meaning and intending to represent, for the purpose of rendering the said Sir John ridiculous, and exposing him to laughter, ridicule, and contempt; that one copy of the said first-mentioned book of the said Sir John, and two copies of the said book of the said Sir John, secondly, above mentioned, were so heavy as to cause a man to bend under the weight thereof, and that his, the said Sir John's wardrobe was very small, and capable of being contained in a pocket-handkerchief."—Now you see that is the meaning. Can any thing be more exquisite than the pencil of the special pleader who has so well, not only given the picture of the author, but the meaning of the author; he has told you all that passed within the divine artist's mind—that great painter's mind who made Sir John represented so. Is that a fair review of a man's book?—is that a fair criticism of his book? You may say that is an attack on his poverty: neither personal deformity or poverty, God knows! is any shame to any man. He brings his action, objections are taken, and Lord Ellenborough says, "here the supposed libel has only affected that work of which Sir John Carr is the alleged author." Have we done more? I have shewn it is all as editor. If an author may be attacked, so may an editor; he is in the nature of an author. "And one writer, in exposing the follies and errors of another, may make use of ridicule, however poignant. Ridicule is often the fittest weapon that can be employed for such a purpose. If the reputation or pecuniary interests of the person ridiculed suffer, it is *damnum absque injuria*. Where is the liberty of the press, if an action can be maintained on such principles? Perhaps the plaintiff's Tour through Scotland is now unsaleable, but is he to be indemnified by receiving a compensation in damages from the person who must have opened the eyes of the public to the bad taste and inanity of his composition? Who would have bought the works of Sir Robert Filmer, after he had been refuted by Mr. Locke? But shall it be said that he might have sustained an action for defamation against that great philosopher, who was labouring to enlighten and ameliorate mankind? We really must not cramp observations upon authors and their works. They should be liable to criticism, to exposure, and even to ridicule, if their compositions be ridiculous, otherwise the first who writes a book on any subject," and so forth. Then he goes on further, all in the same tone. "And even the caricature does not affect the plaintiff, except as the author of the book which is ridiculed. The works of this gentleman may, for aught I know, be very valuable; but, whatever their merits, others have a right to pass their judgment upon them, to censure them, if they be censurable, and to turn them into ridicule if they be ridiculous. The critic does a great service to the public who writes down any vapid or useless publication, such as ought never to have appeared: he checks the dissemination of bad taste, and prevents people from wasting both their time and money upon trash. I speak of fair and candid criticism, and this every one has a right to publish, although the author may suffer a loss from it.—Such a loss the law does not consider an injury, because it is a loss which the party ought to suffer; it is, in short, the loss of fame and profits to which he was never entitled: nothing can be conceived more threatening to the liberty of the press than the species of action before the Court. We ought to resist an attempt against free and liberal criticism at the threshold."

Now, gentlemen, I humbly submit the case under his lordship's direction to you; it is for you; his lordship will leave it to you; it is as an editor, and in his capacity as an editor,—over and over again you are reminded of it; in his editorial capacity it is that the rival editor pronounces his opinion, and, proceeding on a mistake with respect to a fact, which must needs have been committed by him, because, as I told you before, no man breathing could have stated that which he knew every man breathing, or at least every man reading and seeing, could contradict him in; it could not by possibility be otherwise than a mistake: it is for you to say whether this is written of him in his capacity of author or editor, or both.

There was a case very lately in the Court of Exchequer, in which I was of Counsel for one of the parties, and which I afterwards moved in Court, and had the opinion of the Court upon, strongly confirming—I should say carrying it, if any thing, a step further, rather than falling a step short of the law as laid down by my Lord Ellenborough. An author had written a book, in which he says, "Mr. Such-a-one," who brought the action, the case of Hall and Longman, "Such-a-one gave a lecture the other day," he was a lecturer like the doctor,—"Mr. Such-a-one gave a lecture, and professed to have discovered a method, a certain method; he had great fluency, and he had great effrontery; he had some address, and some cunning; nothing seemed to be wanting to him but honesty, common honesty." I think it was "honesty," in so many words; "he takes my invention, which I had published long before, he tricks it out, and decks it out as his own, and he pretends to be the author of this, most dishonestly." Now the charge is of dishonesty, and of dishonesty of the grossest kind; namely, of having got up at the West end of the town, before two or three hundred people, and pretending to give a lecture and tell of a discovery of a method which the individual, a doctor, who was the author, and then the defendant, in that case, had published the year before; he takes it to himself, he is a man of impudence, he is a man of effrontery, he has every thing but honesty; but honesty, that quality which makes one man's property secure from another man, that quality this individual has not." The Jury found, under the direction of the learned Judge, there was no proof of special damage any more than here, and the Jury found, under the direction of the learned Judge, a verdict which satisfied him. I came to move the Court afterwards, they found for the defendant it was a criticism, or an attack on him in his capacity of an author, and no more. That must have been the ground. I moved the Court, and first I stated, even if it were an attack on him in his character of an author, it was charging him with what no man, I cannot separate the author from the man so completely as to know that a man can be honest as an author, and yet knavish as a man; I argued that the injury is imputed here of interfering with another man's property, whether done by an author publishing a book as his own, which is mine, or whether it is done by taking my property from me which he has no right to intermeddle with; still it is a charge of dishonesty in the one case as well as the other. The Court of Exchequer unanimously gave judgment *seriatim* against me on that point, and they maintained it was only a remark by one author against another, and that it was childish to think that Courts of Law were to be loaded with quarrels formed on such grounds, and refused to grant the rule.

Gentlemen, I put it to you, that the case which I have cited is stronger than the present. It is worse to say a man has effrontery and wants nothing but common honesty; and not to say that vaguely and generally,—although that would be bad enough; but to make that out by a particular case given, which case was admitted to be false, for they never pleaded a justification;—it was worse, a thousand times, to say that, than talk of editorial duplicity—to call a man "Roderick" instead of Doctor—to talk of yellow funguses, instead of books—to talk of the first of April in connexion with his name, instead of any other day of the year—to talk of fabricated in the way I have described to you he means fabricated, and can only mean it,—and to talk of wilful omission or omissions as if they had been wilful, when they were either wholly accidental or no omissions at all—that being a mistake.

Gentlemen, according to this case, this must be allowed too. I submit these observations to you, perfectly confident you will give them the attention which their intrinsic weight, and their bearing on the case, will appear to you to deserve; and so doing, I take my leave of you, hoping that nothing that I have said,—I am most anxious, after the ornamental little piece of fancy which my learned friend conjured up for your amusement today,—I am most anxious to add this much, trusting and hoping that nothing which I have said, from the beginning of my address to the end, will be taken or deemed by you, or any one who hears me, to be a reflection, in the slightest degree, against the respectable character of the plaintiff.

Lord TENTERDEN, in summing up:—

Gentlemen of the Jury,—This is an action brought by Dr. Macleod for a libel; the publication of which the plaintiff complains appeared in a medical periodical work called the Lancet, of which it is admitted the defendant is the editor, and for the contents of which he is therefore responsible. The matter of the publication relates to the plaintiff's conduct as editor of another medical publication, called the London Medical Journal.

Now, a man has an equal right by law to have his character as an editor protected, as he has a right to have his character as a professional man, or a man of business, or of any other kind. In remarking, however, and criticising on the works of literary men, whatever is fair and reasonable to be said respecting them, or their conduct, as connected with their works, may lawfully be done. But if any person goes beyond the reasonable line of fair and honest criticism, and makes an attack on the character of another in his editorial capacity, as in any other capacity, he is answerable in damages to the plaintiff who may be attacked.

The subject of the plaintiff's publication, in this instance, and also of the defendant's, appears to be the treatment of a disease called aneurism in the carotid artery. The learned Counsel, who has addressed you last, said a great deal about the existence of some controversy. I cannot find, in the publication, that any controversy at all did exist on the subject. It appears attempts had been made—some recently, and some at a more remote period,—to find a cure for that malady by tying up the artery beyond the place at which the tumor existed, it being often difficult to get at it on the side next the heart; and then the plaintiff, in this first number of his publication, speaks of that as a matter which, if it be practicable, is a great advance of science in the practice of surgery, if it can be done with effect, and that it would be much recommended if it could be done with success; but we know that, whether an operation can be performed with success in a particular manner, will depend on the result of many cases: there must be several instances and experiments tried, before you can come to a conclusion one way or the other.

Now, the plaintiff had, in a publication put forth by him as early as the month of December, 1825, given an account of a case of a cure of this disorder, called carotid aneurism, by Mr. Wardrop: *it is mentioned in the body of that* *work, and it is mentioned on the cover also:* "Case of Carotid Aneurism, successfully treated by Mr. Wardrop," referring to the page at which it is found and in that page there is an account given of the treatment of a lady considerably advanced in life, represented and appearing to have come from Mr. Wardrop himself, and represented as having been successful; and the editor, the plaintiff, says on that—"The result of the case has fully proved the legitimacy of this reasoning, and, as it is the first successful operation of the kind which has been placed on record, we should consider it a great omission were it not to be found in the pages of our Journal." Now, it is important for you, in the consideration of this case, to bear in mind that, as early as December 1825, the plaintiff's work contains an account of the treatment of a case of that kind by Mr. Wardrop;—I say it is very important for you to attend to that, because you will find, when the defendant's publication comes to be more particularly mentioned to you, that he asserts, until the month of April 1827, the plaintiff had noticed no case of this kind: his assertion, therefore, in that respect *is manifestly false.* It is said that he must be supposed not to have known it was false—to have written under a mistake.

Gentlemen, before a man takes on himself to assert a fact respecting another, and to assert it in a way that may be prejudicial to him, he is bound to see that the fact that he asserts is true; it is not for him to come afterwards, and say, "I made this assertion—I find out now that I was mistaken in it, and am sorry for it." It is hardly to be allowed; because in the mean time, you know, the injury is done to a man's reputation by the readers of the work. The plaintiff having published that in the month of December, 1825, he does not appear, in this publication, to have noticed any other case of that kind until you come to the month of April 1827, and then the publication contains this:—"Dissection of one of the cases of Aneurism, in which the Carotid Artery was supposed to have been tied beyond the Tumor."

[Here follows the account from the London Medical and Physical Journal.]

He says, the reason why I give you the account of a case in which this operation was supposed to have been performed, which turns out not to have been performed, is because it relates to an important practical question. Then comes the publication in the defendant's work, of which the plaintiff complains. It begins in this manner—"We must again return to the April number, for the purpose of noticing two papers which refer to the recent operations for the cure of carotid aneurism, by tying the vessel beyond the tumor. The first case successfully treated after this method was published by Mr. Wardrop—" (that is the case the plaintiff published in his Journal of December 1825,)—"in Part 1st, Volume 13, of the Medico-Chirurgical Transactions, on the 5th of January, 1825, and was copied into the Lancet of December the 31st, 1825;—the second case, treated by Mr. Wardrop, appeared originally in the Lancet of December the 23d, 1826;—the third case, treated by Mr. Lambert, was published in this Journal of March the 24th, 1827; during the whole of which period not one word has been said of these most important operations in the yellow Journal."—That is untrue; because one of the first of them had been mentioned, and mentioned in a way complimentary to Mr. Wardrop, who had performed the operation,—"by that exceedingly sagacious, active, and intelligent editor, Roderick Macleod. But, on the 23d of March, the subject of Mr. Wardrop's second operation having died from an enormous hypertrophy of the heart—" Whether it was the subject of the second operation of Mr. Wardrop, or any other, does not appear by this publication of the plaintiff, but probably, however, it was.—

"Roderick, in his April number, presents his readers with his first notice of either of these operations—" Now, that is not so—" in the following account of what he calls the 'dissection' of the body. This account we will here insert, italics, capitals, and all, in fact, without altering either word or letter."—Then he furnishes the account of the dissection of the body, and declaring the artery had not been tied up as had been supposed.

[Here follows the libel.]

Now that is the matter of which the plaintiff complains. That there is a great deal of attempt in it to cast ridicule on the plaintiff is not denied. I think it can hardly be said, by any person, that there is not in it a great deal of bitterness; but if all this has been called for by the conduct of the plaintiff as the editor of the Medical Journal, I should say the defendant was entitled to your verdict; but, then, has it been called for? Now, you see almost the whole of what the defendant says here to disparage the plaintiff as an editor is this, to bring it to a short point, Cases existed, and were known, of successful treatment of this disorder; Dr. Macleod never once publishes any one of them; withholds all from his readers; as soon as a case occurs in which it is apparent there has been a mistake, he gives that to the world. *Was that true?* Dr. Macleod had, as early as April 1825, given an account of the very first operation in terms of compliment to Mr. Wardrop. When you find that the terms which are contained in this libel are bottomed on a *false assumption—for so they clearly are*,—it is for you to say whether they are not, in your judgment, calculated to injure the plaintiff's character as a medical practitioner, or in any other way, or whether they are fairly called for by any thing as regards his character: if you think they are fairly called for by what he had done as editor, find your verdict for the defendant;—if you think they are not called for, (and, as they are founded on a *false assertion*, I can hardly suppose you will think they are called for,) then the plaintiff is entitled to your verdict; and the amount of damages is for your consideration, only take care that they are of a moderate nature.

Verdict for the Plaintiff—Damages £5. *Certified.*

To the readers of this Journal, who must be acquainted with the line of conduct adopted by the Editor towards the *Lancet*, but few observations on the trial above detailed can be necessary. For several years, no notice of the *Medical and Physical Journal* was taken in the *Lancet:* suddenly, however, it was assailed by constant misrepresentation and virulent abuse. Extraordinary as this change may appear, it is easily accounted for. Anxious to render the publication more worthy of the patronage which it had received, we formed arrangements, in the spring of 1826, by which Cases and Papers were transmitted by some of the most eminent members of our profession in London, for insertion in the *Medical and Physical Journal.* The improvement of another periodical was obviously either hurtful to the feelings of the Editor of the *Lancet*, or perhaps he feared it might prove injurious to his interests; and from that hour we, and all who wrote in our Journal, became marked as the objects of obloquy and slander. Disdaining to retaliate on so illiberal an opponent, we remained silent, and bore with "a patient shrug" the succession of revilings which were heaped upon us in that peculiar strain for which the *Lancet* is so remarkable, but which would never have induced us to deviate from the path we had marked out. It was not to protect us from the vulgar abuse of the *Lancet*, that we appealed to a Court of Law; but it was to clear our character from an accusation, which, if true, would have rendered us utterly unworthy of the confidence of our readers, and unfit to continue the direction of a Journal, the good faith of which was never before called in question, and we are bold in saying has never in our hands been compromised.

The evidence afforded by the details of the trial will be sufficient to convince any one who takes the trouble to peruse it, that the accusations of the *Lancet* are wholly without foundation. It will be seen that we had published the case of Carotid Aneurism (which we were said to have suppressed) on the 1st of December, 1825, and bestowed upon the operation the humble tribute of our commendation. It is remarkable, too, that the *Lancet* did not publish the case till December 31st, nearly five weeks after it had appeared in the *Medical and Physical Journal.* The circumstance assigned by the Editor of the *Lancet* as having led him to suppose that the case in question had not been published by us, is this:—Mr. Wardrop's paper was contained in the *Medico-Chirurgical Transactions*, the review of which having extended through two Numbers, we stated that, instead of continuing to analyse what remained, we should *probably* insert the papers in our COLLECTANEA: but that department in the following Number being preoccupied by the posthumous papers of the late Dr. Baillie, we resumed our analysis; a circumstance pointed out by two notices on the cover,—one referring to the *Medico-Chirurgical Transactions*, and the other to this particular case, which was likewise entered in the INDEX to the volume. To say that, because this case could not be found where we had said it would *probably* be placed, afforded any proof that it had therefore not been published at all, and thus misled the Editor of the *Lancet*, is a mere subterfuge, to which no credit can reasonably be attached.

With regard to the circumstance of omitting Mr. Wardrop's second case, and that of Mr. Lambert, our reason for having done so is this: we never have regarded the *Lancet* as a publication of sufficient authenticity to induce us to take any cases from it. Had we partially selected from that work, it might have been said that Mr. Wardrop's second case deserved a place as well as his first; but we have always, and for the reason above mentioned, avoided quoting from the *Lancet*. As to the account of the dissection of Mr. Wardrop's second patient, we assigned our reasons for inserting it at the time, namely, because, in a previous part of the Number, Mr. Travers had alluded to this mode of operating as likely to prove of advantage "if borne out by similar results," and because we regarded the case as one which involved a great question in the practice of surgery.

A simple statement of these facts in this Journal was not calculated to give them the publicity they have obtained from a Court of Law, and it was this consideration which induced us to have recourse to legal measures. We have to apologise for having devoted so large a portion of this Number to matters personal to ourselves, and therefore foreign to its legitimate purposes:—hereafter, it is scarcely necessary to say that we shall adopt the same course we have hitherto pursued; leaving to his nicknames and his ribaldry one who can never form a fair and honourable opponent in any scientific or literary controversy.

⁂ There is one circumstance connected with the trial, which does not appear in the above account of it, and to which we think it right to direct attention. In such cases, the plaintiff has it in his power to bring an action against the printer or publisher of the work, as well as against the editor, so as to double the costs; and this method, it may perhaps be remembered, was adopted by Mr. Wakley towards Dr. James Johnson. We directed our attorney to inform the defendant, that, if he acknowledged himself to be the editor of the *Lancet*, "for all the purposes of this cause," "so that the plaintiff may have no occasion to prove that fact on this trial," we would content ourselves with the single action. These terms were accepted; and Sir James Scarlett, guided by the honourable understanding which exists in such cases, regarded any proof of the editorship as unnecessary, seeing the admission was a general one, made in acceptance of the above-mentioned conditions. The admission was dated February 13th, and the editorship of the *Lancet* published three days after was denied. The objection was held good in law, and made a material difference in the features of the case; but we do not envy those who made it the indignant remarks of Sir James Scarlett on the occasion. This we trust will prove a caution to any other who may be placed in similar circumstances to ourselves.

METEOROLOGICAL JOURNAL,

By Messrs. Harris and Co. Mathematical Instrument Makers, 50, High Holborn.

January	Rain gauge.	Moon.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 *a.m.*	2 *p.m.*	10 *p.m.*
20			51	58	43	30.18	30.18	87	90	W	SW	Fair	Fine	Fair
21			47	50	45	30.13	30.11	94	96	WSW	SW	—	—	—
22			45	46	40	30.00	30.13	96	96	WSW	WNW	—	—	—
23		☽	48	52	44	30.16	30.24	97	98	W	NW	—	—	—
24			50	52	48	30.23	30.23	97	98	WSW	WSW	Cloudy	—	—
25			53	54	42	30.20	30.01	98	98	WSW	WSW	—	Rain	—
26			45	51	47	30.15	30.23	94	96	WNW	W	—	Fair	—
27			49	53	37	30.24	30.31	94	96	WNW	W	—	—	—
28			42	47	42	30.31	30.25	90	96	W	WSW	—	—	Cloudy
29			45	50	40	30.08	30.06	96	98	SW	W	—	—	Fair
30			43	47	40	29.98	29.90	96	98	W	SW	—	Fine	—
31			46	49	43	29.90	29.86	98	98	WSW	SW	—	—	Rain
Feb.														
1	.3	○	50	54	47	29.95	29.96	98	98	W	W	Rain	—	Fine
2			50	51	39	30.01	30.08	96	90	WNW	NW	Fair	—	—
3			45	49	39	30.34	30.29	96	97	WNW	W	—	—	—
4			45	52	39	30.24	30.13	94	98	NW	W	—	—	Cloudy
5			46	53	43	30.15	30.01	93	98	W	NW	Cloudy	Fair	—
6	.10		50	54	45	29.93	29.91	98	98	W	NW	Rain	—	—
7	.12		51	54	41	29.84	29.77	94	99	NW	W	Fair	—	Rain
8		☽	44	47	39	29.76	29.69	90	99	NE	NE	—	—	Cloudy
9			43	46	34	29.63	29.63	90	98	NE	NE	Cloudy	Rain	—
10			35	36	30	29.71	29.54	96	98	ENE	SE	Cloudy	Cloudy	—
11			32	33	28	29.35	29.73	95	90	ESE	NE	Snow	Snow	Fair
12			29	33	29	29.83	29.93	93	94	N	N	—	Fair	—
13			30	32	32	30.01	29.92	98	98	NE	SE	Fair	—	—
14			33	35	32	29.45	29.43	96	98	S	W	Snow	—	Cloudy
15		●	34	38	31	29.62	29.72	98	98	NW	WNW	Fair	—	—
16			32	36	31	29.76	29.74	94	92	WNW	SW	—	—	—
17			34	38	32	29.61	29.44	90	94	SW	SSE	Fine	Fine	Fine
18	.14		36	41	36	29.29	29.21	97	98	SE	W	Cloudy	Rain	Rain
19			38	47	37	29.26	29.26	99	98	WNW	WSW	Cloudy	Fine	Fine

ERRATA.—*Page* 103, *line* 22, *for* was *read* were; *page* 104, *line* 14, *for* head *read* band; *page* 106, *line* 34, *read* on the Spontaneous, &c.

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THE LONDON
Medical and Physical Journal.

Nº 350, VOL. LIX.] APRIL, 1828. [Nº 22, *New Series.*

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL PAPERS,
AND
CASES OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER AUTHENTIC SOURCES.

IRIS.

On the Physiology of the Iris. By EGERTON A. JENNINGS, Member of the Royal College of Surgeons.

PHYSIOLOGISTS, in their attempts to account for the motions of the iris which produce contraction and dilatation of the pupil, have generally adopted one of the two following theories: either they have supposed the iris to be composed of two sets of muscles, one arranged circularly, whose contractions diminish the aperture of the pupil; the other composed of straight fibres, whose contractions dilate the pupil: or else they have supposed the substance of the iris to be an erectile tissue, its dilatation or contraction depending on the quantity of blood circulating through its vessels.

There are, however, numerous facts that cannot be accounted for by either of these theories. Thus, if the former theory be true, the dilatation of the pupil caused by a large dose of digitalis, or by the local application of belladonna, and the same effect as caused by pressure on the brain and by death, can only be accounted for by supposing its muscles to be deprived of nervous influence. That being the case, the same cause that deprived the sphincter muscle of its nervous influence should also deprive the straight fibres of theirs, and the iris should remain in an inactive state, between contraction and dilatation; or it should become paralysed, in whatever state it might be at the time the cause of the paralysis was applied. But this we know is not the case,—the pupil is always dilated.

Again, when the anterior part of the iris is irritated, contraction of the pupil takes place. If there were both straight and circular muscular fibres, both being equally stimulated, the iris should remain stationary, or alternately dilate and contract, from the two muscles alternately acting, as the flexor and extensor muscles of a limb do, when the nerves leading to them are stimulated. Supposing the sphincter muscle to be much the stronger of the two, the contraction might arise from its overpowering the straight fibres; but then, when belladonna is applied to the eye, the straight muscle, being the weaker, should be first paralysed, and we should have the pupil more contracted, at least for some time before the dilatation commenced. A theory which cannot account for such important facts as these, cannot be correct. Let us now examine the other, which supposes the movements of the iris to depend upon the injection of its vessels.

The first objection to this theory is, that we have no proof of an increased supply of blood being sent to the part at the time of its dilatation; while, in the next place, we have distinct proof that an increased quantity of blood may be circulating through the iris, and yet the pupil be preternaturally dilated. This is the case when belladonna is applied during inflammation of the iris. Here, though we see the anterior ciliary arteries injected with red blood, yet the pupil is much dilated. This it most certainly should not be, if the dilatation of the iris depended on the quantity of blood circulating through its vessels.

It may be asked, can any theory be offered capable of accounting for these facts? I think there may; and one that in a great measure removes the perplexity that has surrounded this interesting subject. But, before offering any theory, let us examine the anatomical structure of the parts in question, and endeavour from that to draw some legitimate conclusion concerning the function of the different parts.

If we examine the anterior surface of the iris, we can plainly distinguish a small portion, extending round the pupillary margin, differing in colour and appearance from the other part. This, in the best delineations of the iris, is represented as composed of circular fibres, and I am inclined, for reasons I shall hereafter assign, to believe it to be a circular muscle.* The nerves distributed to the iris arise from two sources: from the third pair, and from the first division of the fifth pair of nerves. The latter, as far as we are acquainted with its functions, as distributed to the upper part of the face and head, is entirely a nerve of sensation, while the former only presides over muscular motion.

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* By the term muscle, I would be understood to mean an arrangement of animal fibres having a power of contractility dependent on nervous influence

The distribution of a muscular nerve to this organ would, of itself, be a strong presumptive evidence that some part possessing muscular power did exist, and would render it probable that the motions of the iris depended in some way on muscular action. This supposition is rendered still more probable by the fact that, in some animals, as the rabbit and guinea-pig, the third is the only nerve that sends filaments to the iris. Hence, as contraction and dilatation of the iris takes place in them, its simple motions must be radically independent of the fifth pair of nerves, however much they may influence the time and circumstances under which it acts.

Having given the reasons that principally induced me to think the motions of the iris dependent on muscular action, I shall next endeavour to point out the mode in which its different motions are effected.

The dilatation of the iris, and consequent contraction of the pupil, I believe entirely to depend upon the contraction of a sphincter muscle, situated at the pupillary edge of the iris. This I am induced to believe from the fact that all stimuli applied to the nerves of the part occasion this contraction; and any thing that tends to paralyse these nerves, as the application of belladonna, pressure on the brain, and death, all deprive this muscle of the power of action. On the other hand, I believe the contraction of the iris, and consequent dilatation of the pupil, to depend on the elasticity of the parts situated between the sphincter muscle and ciliary margin, a power distinct from muscular contraction, as it is independent of nervous influence, and even of life itself. This would account for the dilatation of the pupil when the supply of nervous influence is cut off; and it is not the only case in which nature has placed simple elasticity as an opponent to muscular contraction. In respiration, the elasticity of the cartilages of the ribs draws down the chest when the muscles of inspiration relax; and, from their elasticity continuing after the inspirators are deprived of all supply of nervous energy, expiration is the last act of life. The contraction of the iris taking place at, and continuing after, death, certainly shows that it also depends on elasticity, a power uninfluenced by the vitality of the parts.

I had recently a case under my care, showing very decidedly the influence of the ciliary nerves on the contraction of the iris. The following I extract from my notes of the case:

"J. Green, a labourer, was accidentally struck on the upper part of the eye by the lash of a carter's whip. I saw him soon after the accident, and found the upper eyelid cut. On the upper surface of the globe of the eye, about two lines from the cornea, there was a slight extravasation of blood on the sclerotica, beneath the conjunctiva. The iris presented a curious appearance: it was contracted along its upper margin, while the rest of it was dilated; the pupil was thus drawn nearly to the ciliary margin at the upper part of the eye, to an extent corresponding with the extravasation on the sclerotica. On exposing the eye to a strong light, the upper portion of the iris was fixed, though the other parts dilated and contracted as usual."

From the paralysis of the portion of the iris being so immediate, and so exactly corresponding with the extent of injury done to the sclerotica, I think myself justified in concluding that it must have been caused by concussion of the ciliary nerves; and the iris being so closely contracted at the part corresponding to the injury, shows that its contraction is different from muscular action, being independent of nervous influence.

Mr. Lawrence has met with two cases, showing still more decidedly that the dilatation of the iris depends on muscular action, (at least on a power which, like it, owes its action to the influence of nerves of muscular motion:) he does not, however, seem to have drawn any conclusion from them. He says, "I have seen two cases* in which there was a paralysis of all the parts supplied by the nerves of the third pair, viz. three of the recti muscles, one of the oblique muscles, and the levator palpebra superioris; so that the upper eyelid could not be elevated, and the globe was drawn outwards by the external straight muscle. In both instances the pupil was largely dilated. You may, perhaps, suspect that the optic nerve may have been insensible; but this was not the case: for, in one of those instances, when the patient looked through a minute opening in a card, producing what may be called an artificial contracted pupil, vision was perfect."

These cases are, in some measure, similar to the one I met with, as far as the iris is concerned; but they are much more satisfactory, as the paralysis was more complete; and, as the fifth pair of nerves appear to have been in a perfect state, they prevent the possibility of our attributing the contraction of the pupil to their influence.

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* Lancet, vol. ix. p. 245.

The fact that the pupil is contracted during sleep may be thought opposed to the idea that its contraction is dependent on the action of a sphincter muscle; for, at that time, muscular energy seems to be suspended. I do not, however, apprehend it to be any objection. The sphincter muscles differ from the straight muscles, inasmuch as they never appear to be fatigued by action. Thus, when the general muscular system is in a state of rest during sleep, the sphincter ani and the sphincter vesicæ both continue to act: so does also what I have termed the sphincter muscle of the iris. This, therefore, seems only to render it more closely allied to the other sphincter muscles.

What then, it will be asked, is the function performed by the branches of the fifth pair of nerves distributed to the iris? That they are sent there for an important purpose, no one can doubt. I have observed some facts which may, I trust, tend to throw some light on this interesting subject. But this paper is already too long to permit of my entering upon that subject at the present time. I shall, however, continue my investigations, and probably, at some future period, communicate the result of my observations.

Leamington Spa; January 5th, 1828.

AFFECTION OF THE CHEST.

A Clinical Report of Chest Affection. By Powell Charles Blackett, Member of the Royal College of Surgeons, London; Surgeon Royal Navy; and Surgeon Extraordinary to his Royal Highness the Duke of Clarence, &c. &c.

F. H., ætatis sixty-five, by trade a plasterer, sent for me on the 17th of December last. He complained of great exhaustion, from having, during the night, coughed up a considerable quantity of blood. This patient had been a hard drinker for more than twenty years, and had laboured under a severe cough during the last two, the remains of an attack of pneumonia, expectorating daily from eight to nine fluid ounces of mucus, and that too occasionally streaked with blood; complaining always of pain in the left side, and great difficulty of breathing, especially in the horizontal position; with frequent attacks of vertigo, seizing him often in the streets so suddenly as to compel him to hold by the rails for support. He had considerable pain about the sternal extremity of the eighth rib of the left side, which darted occasionally to the same extremities of the seventh and ninth, and then, leaving these anterior parts, would fix itself suddenly in the dorsal extremities of the three last-mentioned ribs. Always, since the attack of pneumonia, he has experienced a difficulty in ascending a ladder or steep staircase, his breath stopping, attended with a complete constriction about the lower end of the sternum, with occasional pain at the scrobiculus cordis. His bowels are always in a state of constipation, yet the motions are of a healthy colour. He is frequently passing urine, which is of a higher colour than usual. Whenever the phlegm accumulates, he is seized with vertigo, continuing until the cough comes on: this, which is spasmodic, never ceases until the fluid is fully expectorated, when he finds relief, and falls into a sound sleep. These attacks are more frequent during the night than in the day. He can lie at times on either side or back, but frequently he can do neither, but is obliged to be propped up. He is much influenced by the weather, especially by changes from a mild atmosphere to fog or frost, and by the east wind: the consequences resulting from this alteration in the state of the weather are ever fresh excitements to his various symptoms, rendering his life an accumulated state of disease and wretchedness. His pulse, generally speaking, is frequent and weak; his thirst at times excessive; his appetite bad; his appearance cachectic; his body much emaciated; and his whole frame, indeed, so exceedingly irritable, that the slightest cause will excite an universal tremor and agitation, followed by violent coughing, &c.

December 17th.—I found my patient much exhausted from the large quantity of blood he had coughed up, which was full twelve fluid ounces, florid and coagulated. He said he had been unwell for the last ten days or fortnight, but that yesterday afternoon he was taken suddenly ill, with shivering, accompanied with great difficulty of breathing and continued cough; that, between the hours of nine and ten, these symptoms increased, attended by great pain about the eighth rib on both sides, and slight pain at the scrobiculus cordis; that he expectorated much phlegm streaked with florid blood, and then fell asleep, and rested tolerably well until between three and four o'clock this morning, when every symptom was so aggravated that he started suddenly from his sleep, with a strong feeling of suffocation, utterly unable to remain in the horizontal posture, finding no relief except in sitting up and throwing himself forward. This orthopnea lasted about fifteen minutes, when the cough commenced, and he threw up the blood before mentioned. After this discharge, he found himself greatly relieved, and could slightly recline on his back; but neither cough nor expectoration left him, he continuing to throw up much viscid phlegm and coagulated blood. It was five o'clock P.M. before I was sent for to attend him, and consequently did not see him until the above symptoms had taken place. His attendants told me he had been fully employed in his business, and exposed to the weather, for the last two or three months, and that he appeared much as usual until the 7th of December, when the south-west winds oppressed and relaxed him; and that, on the

15th, the wind becoming due east, with foggy weather, he began to complain of great difficulty of breathing, pain, &c.

The quantity of mucus and coagulated blood, independently of the discharge of pure blood during the night, was about sixteen fluid ounces. The viscidity of the phlegm was so great that it required great agitation to separate it from the sides of the vessel: water was added, and it floated, but the coagulated blood sunk to the bottom; the phlegm was transparent and colourless. The respiration was tracheal, with the mucous wheeze; his voice vibrated, and was louder than natural, and, strange to say, he did not stutter, although, when in a state of health, and indeed to the present time, he could not articulate half a dozen words without most considerable stammering! His pulse was quick, small, and wiry: he had great pain in the head, pallid countenance, dry tongue and foul, parched skin, great thirst, and confined bowels; he passed little or no urine, and had a fixed pain distressing him about the scrobiculus cordis, as well as at the sternal extremities of the six inferior ribs on both sides.

In this case I did not deem blood-letting expedient, owing to the debilitated state of my patient, in whom I am satisfied it could answer no good purpose, but, on the contrary, would have weakened him, and deprived him of that strength so necessary for combating the disease. We must be all aware that much mischief has been done by the injudicious and undistinguished use of the lancet. ARMSTRONG says, in his Medical Essays, anno 1773, "The first thing that is commonly done in a fever is to let blood: if the patient is nothing better next day, if even worse, perhaps for his loss of blood the day before, the bleeding is repeated, *because* it is a fever;" and he further adds, "I am positive it is talking very much within bounds to say, that many more Englishmen die by the lancet at home than by the sword abroad." My patient had likewise excessive impatience and irritability, accompanied by an exceeding dread of the lancet. I therefore pursued the following plan of emptying the bowels, allaying excitement, and causing counter-irritation.

> ℞. Hydr. Submur. gr. iij.; Extr. Colocynth. C. gr. vj. fiant pilulæ duæ statim deglut.—℞. Magnes. Sulph. ℥ss.; Infus. Sennæ ℥j.; Aq. Menth. Pip. ʒss. M. fiat haust. post horam unam sumendus.—Empl. Lyttæ sterno applicandum.—℞. Potass. Acetat. ʒj.; Syrup. Papav. ℥ss.; Aq. Menth. Virid. ℥vss. M. capiat quartam partem quartâ quâque horâ.—Diet: whey, toast-and-water, and fruit.

18th.—Respiration rather easier; could lie completely on his back; still the mucous wheeze. Bowels have been opened several times, with not the least appearance of blood in the discharge, but accompanied profusely by mucus. Pain at the scrobiculus cordis less; pain in the chest less on the right side—on the left as before; pulse as yesterday; tongue clean, skin moist. Has voided his urine five times, about three ounces at each time: it is high coloured, with the brickdust sediment; pain of the head less, but feels very giddy when he moves. Between the hours of three and four, he had another attack of orthopnea, after which he threw up about seven ounces of blood mixed with phlegm.

Medicamenta repet^r, sine pilulis.

19th.—As yesterday.

20th.—Somewhat easier; but seized, as usual, between three and four in the morning; the quantity of blood thrown up was only three ounces. Phlegm very viscid, and of a yellow colour; pulse much the same; urine less in quantity, yet of a high colour, with the same sediment. Was in a profuse state of perspiration for two hours. Bowels confined.

Ordered to continue his mixture and diet, with the following—℞. Ext. Colocynth. C. gr. x.; Hyd. Submur. gr. iv. fiant pil. iij. h. s. sumendæ.

21st.—Respiration easy. Bowels opened five times, not any appearance of blood in the evacuations. Pulse soft and regular, about ninety; skin moist; was in a high state of perspiration this morning for three hours; urine the same in quantity and appearance. Had an attack during the night as usual, but expectorated only two ounces of blood. The quantity and colour of the phlegm as yesterday.

Mist. repet^r, cum eadem diæta.

22d.—He is today much worse than yesterday, complaining of great difficulty of breathing, so much so, that to breathe at all he is obliged to be propped up in bed. Bowels once opened. Has passed very little urine, and that of a dark red colour, without sediment. Has expectorated more phlegm than yesterday, and it is more streaked with blood, and the colour is darker. Was in a profuse perspiration during the night, which commenced as soon as the usual attack subsided. My patient not being so irritable today, I got him to consent to the application of the stethoscope. Having removed his flannel shirt, &c. I applied the instrument, without the stopper, to the sternal extremity of the ninth rib on the left side, where the respiratory murmur was absent. I then applied it to the seventh rib, from its dorsal to its sternal extremity, with the same issue. The third application was to the fifth and sixth ribs, from one extremity to the other, where I perceived the mucous wheeze, showing that there was a copious discharge, or rather extravasation, into the air-cells and bronchial tubes. I then removed the instrument, and applied it to the axilla, where the mucous wheeze was yet stronger, causing to the ear a sensation like gurgling. On the right side, the stethoscope was applied as on the left: the respiration gave the mucous wheeze, unattended by the gurgling in the axilla. On percussion, the sound was dull in every part of the chest, excepting the axilla on the right side. He complains today of great pain at the sternal extremities of the seventh, eighth, and ninth ribs of the left side, and at the scrobiculus cordis, attended with excessive nausea; his pulse is quick and full, about 112; formerly his pulse was always quick, weak, or small. I waited twenty minutes, and again tried the pulse: it was then as usual, quick, weak, and small. This state of the pulse again did away with all idea of blood-letting. PERCIVAL says, in his Essays, "But when the disease is of a mixed kind,—when the lungs are not so much inflamed, or loaded with a pituitous matter,—when bleeding gives but little relief,—when the pulse, though quick, is small,—when the patient is not able to bear evacuations, and the disease hath continued for some time, in such circumstances epispastics will produce remarkably good effects." Upon this doctrine, I ordered a large blister to the lower extremity of the sternum, with five grains of Calomel going to bed, and the following mixture:

℞. Magnes. Sulph. ʒiij.; Acid. Sulph. dilut. m. xl.; Syr. Papav. ℥ss.; Aq. puræ ℥vss. M. fiat mist. cujus capiat coch. iij. sextâ quâque horâ.—Continue his diet.

Weather foggy and cloudy; wind NNW.

23d, three P.M.—Found him easier today, and lying on his back, but very much exhausted from the exertion of coughing and expectorating in the night, which commenced between the hours of three and four. He was almost suffocated by the orthopnea, but, after two severe efforts, threw up sixteen ounces of dark blood, but not coagulated as was the case at first; after which, till the time I saw him, he expectorated a pint of yellow phlegm, mixed with blood very dark in colour. Pulse quick and weak; bowels opened three times: the first evacuation was constipated. Has made a pint and a half of water, not so dark as before, which has precipitated the brickdust sediment. The pain is now confined to the eighth left rib, at its sternal extremity. Applied the stethoscope: the wheeze the same as yesterday, but not so violent.

Medicamenta repet^{r}.

Weather milder, but cloudy; wind W.

24th.—Rather easier. Threw up, during the night, seven ounces of grumous blood; the expectoration of phlegm not so profuse, but mixed still with clotted blood. Respiration easier.

Medicamenta repet^{r}.

Wind WNW.

From the 24th of December to the 2d of January, 1827, there was hardly any alteration; there was, perhaps, a shade for the better; but, on January 3d, he was attacked as on the 22d of December. I ordered him the same remedies. The stethoscope was applied, with the same results. Wind W.

January 4th.—The same as on the 23d December. Wind N. with snow.

5th.—Easier than yesterday in every respect.

He continues to get better and better every day, the morning paroxysm gradually lessening, until the 19th, when he again complained of great difficulty of breathing, with giddiness and nausea. He complains likewise of being unable to digest the most simple nutriment in a solid state, feeling heavy and fatigued after every slight meal. The stethoscope gave a more satisfactory result as to respiration. The mucous wheeze was still on the left side, unaccompanied by the gurgling in the axilla; on the right side, the sound was crepitating; but neither of these sounds could be distinguished below the seventh rib. Has no pain at the scrobiculus cordis. Wind E.

Ordered him a blister; the mixture and pill as before.

20th.—Had a paroxysm at the usual hour: threw up seven ounces of grumous blood. The phlegm is yellow and opaque, very viscid, mixed with clotted blood. Bowels opened ten times. Voided about two pints of urine, of a light straw colour, with a white sediment. Pulse quick and weak. Wind E.

Continue the mixture.

From this time until the 8th of February he continued mending, but today has the appearance of being threatened with another attack. Wind E.

Ordered him the usual medicines.

February 9th.—Had a paroxysm during the night, but only threw up phlegm, mixed with about one ounce of blood.

Repet^{r} medicamenta.

18th.—He has continued to gain ground until today, when the difficulty of breathing, &c. returned, but not to a great degree. Wind E.

Repeat the blisters, pills, and medicines.

19th.—Had a paroxysm at the usual hour during the night; expectorated only one ounce of grumous blood; after which he fell asleep, and was for five hours in a profuse perspiration. The phlegm now is very dense, and of a yellow colour; the quantity each day about ten ounces: water was added, but the mucus adhered so strongly to the bottom of the vessel that only two-thirds floated. His bowels have been moved seven times. Passes from a pint and a half to two pints of urine daily. His skin is generally moist; his pulse not so quick or weak; his breathing altogether better. Can lie a little on the left side, but, on turning, describes his sensation as of something falling like a substance, in the lower parts of the thorax, towards the side he lies upon: this feeling has been constant during the whole of his illness, so constant that he refers to it, himself, as to a kind of internal criterion of his own state of health. He considers that he has a cavity in a certain part of the thorax; of course, this falling originates from the consolidated lung.

Ordered him mutton-broth, and this mixture: ℞. Quin. Sulph. gr. iv.; Syr. Papav. ℥ss.; Acid. Sulph. dil. m. xxx.; Aq. pura ℥vj.; Magn. Sulph. ℥ss. M. capiat coch. iij. sextâ quâque horâ.

20th.—Found him much exhausted, the mixture having purged him excessively, yet better in every other respect. Not the least appearance of blood in the expectoration.

Ordered him the mixture without the salts.

March 16th.—Has continued to improve ever since. The expectoration is much lessened, as he only throws up daily three ounces of phlegm, which is transparent and colourless, floating in water, and not adhering as before to the vessel.

Continue his mixture.—Diet to be chicken or rabbit, whey, vegetables or fruit.

28th.—Is now as well as he has been for the last two years, but finds himself unable to digest with tolerable facility animal food.

Ordered to live on milk, vegetables, and fruits; to omit his medicines; and directed him to avoid all exposure to cold air or variable temperatures, especially to the easterly winds.

April 29th, 1827.—He says that he is better than he has been for the last two years, and that his present diet so well agrees with him that he never will be induced to change it. His bowels are open constantly; his urine passes more regularly, and in sufficient quantity; he has little of the cough, but when the wind is in the east; his respiration is good, unless he draws a very deep inspiration, and then he feels pain at the sternal extremity of the eighth rib on the left side. On applying the stethoscope, I found no respiratory murmur on the left side, but it commenced about the seventh rib on the right side. There is not the least sound communicated by percussion on the left side, but distinctly perceived on the right wherever the respiratory murmur was present; the resonance was then distinct.

There was neither pectoriloquy or œgophony throughout the whole of the complaint; but that there is hepatization of the lungs, from the eighth or ninth rib on both sides down to the extremities of the lobes, there can be no doubt. I intend to watch narrowly this patient: he has gone through great disease, and must expect another attack. Should he sink under it, I will beg a post-mortem examination, and clear all doubts with regard to the actual causes of, and absolute seat of his disorder.

11, *Park-street, Grosvenor-square;*
March 1828.

FEVER.

Observations on Fever. Addressed to a Medical Friend, by Dr. Bow, of Alnwick.

(Continued from page 194.)

In this stage, the two constant and prominent symptoms are increased heat of the body and increased action of the sanguiferous system; but whether increased heat of the body precede increased action of the sanguiferous system, or vice versâ, is a point which has not been sufficiently attended to, and that, perhaps, because the practitioner is seldom called on until the fever is fully developed. I may say, however, that it is generally believed and inculcated that increased action of the sanguiferous system is the prior symptom, and also that it is generally believed that this increased vascular action is the cause of the heat. I have been subject to fever resembling ague, and in my own case I can assert that there were sensations of heat on various parts of the body before I could recognise any alteration of pulse; but I must observe that I have had only one paroxysm since it occurred to me to watch the priority of these symptoms, therefore I shall lay no stress on my own case. In various authors we meet with remarks touching this point. Dr. **HAMILTON**, in his observations on the seats and causes of diseases, says that increased heat of the body, or at least of particular parts of it, is sometimes felt independent of increased action of the sanguiferous system. And still more to the purpose is the testimony of Dr. **CARMICHAEL SMYTH**. Whilst this physician was inquiring into the nature of the fever which attacked the Spanish prisoners at Winchester in 1780, he was himself attacked, and, in the description of his own case, he says that, after a long exposure to the contagion, although he had felt no inconvenience within the house (where the sick were), he afterwards found himself very giddy, with a considerable degree of nausea. These symptoms, however, soon went off: he ate his dinner as usual, and went to bed seemingly in perfect health; but, about the middle of the night, he awoke from sleep with symptoms of the most violent fever, the oppression of the precordia exceeding all description, whilst the sensation of heat gave him the idea of liquid fire spreading from his stomach across his breast, along the course of the pectoral muscle, and down the inside of his arms to the extremities of his fingers. But, notwithstanding these dreadful sensations, his pulse was regular, and the frequency of it by no means in proportion to the degree of heat; but this was not the case in after periods of the disease.

If increased heat be sometimes felt independent of increased action of the sanguiferous system, it is plain that the latter cannot be looked upon as the cause of the former, and therefore we must look for some circumstance, the effect of primary disorder, which must intervene, and act as the immediate cause of excitement.

I think I can trace this cause, and in it I can see nothing but what is natural and simple,—to an effect of impaired energy of the brain, which I purposely omitted before, to save repetition. We look upon the effect of the remote cause of fever to be impaired energy of the brain, and, from the very sudden invasion of fevers in many cases, and from the very sudden effect of certain gases when inhaled, we are led to believe that the remote cause acts immediately on the extremities of the nerves with which it comes in contact. We recognise this impaired energy by the symptoms to which it gives rise, and if slightly impaired energy cause listlessness, dejection of spirits, and muscular debility, it is but reasonable to conclude that the function of secretion must also in some manner be effected: nor is this a gratuitous assumption, for in the cold stage of fever there is evidence enough to prove it. That the secretions in general are deficient in quantity during the cold stage of fever, no one will deny; yet it may be said that as the capillary arteries are less active in that stage, the secretions may be defective in quantity owing to the want of material for their production; but is that which is secreted perfect in quality? The white and clammy state of the tongue shows an altered condition of the mucous products; the loathing of food shows that the gastric juice is not as it ought to be; the appearance of the stools points to an imperfect state of the bile. If a product of secretion in any one part of the body be altered in its nature in consequence of impaired energy of the brain, we may or must infer that the products of secretion throughout the body will also be affected more or less from the same cause. And when we consider that there is no part of the body in which the operation of secretion is not going forward, and that each and all of its products may become sources of irritation, we cease to wonder that fever should be a disease "affecting the whole system."

In the first stage of fever, the secretions must be regarded as deficient not only in quantity, but also in quality; and these defective secretions again can only be looked on as foreign matter, which after a time must irritate the nervous extremities with which it is in contact, and it is this irritation which, in my humble opinion, determines the hot stage. Diminished sensibility is observed to follow impaired nervous energy; it is therefore reckoned amongst the phenomena of the first stage; and the duration of the first stage is in every instance longer or shorter according to the degree of diminution of sensibility, or the morbid state of the secretions. If sensibility be but little diminished, the cold stage will be of short duration, for in that case the impression from the imperfect secretion is soon conveyed to the sensorium, and the brain being thus roused, nervous influence in greater force is diffused throughout: if, however, sensibility be greatly diminished, then will the cold stage continue until the secretions acquire vitiation enough to irritate. "The sensibility of the skin differs very much in its different parts, but in its general extent it may be considered as possessing the most acute degree of feeling of any of the structures of which the body is composed;"* and it is on that account that the symptoms of reaction first appear on the surface. It is the acute degree of feeling which the skin possesses in its general extent, which gives the disease the form of fever; for were sensibility confined to a part of small extent, the determination of nervous influence to that part would be in force sufficient to excite inflammation; whereas, owing to the general extent of sensibility, the irritation becomes general, and consequently the determination of nervous influence must be general also. But as hereditary taints, former disease, or intemperate habits, may have impaired the functions of some organs, or even altered the structure of others, we frequently meet with topical inflammations occurring at the onset of the second stage, and which in many cases completely alter the form of the disease. The peculiar state of an organ, whether we regard its structure or function, may render it more liable than other parts to be affected by causes operating upon the system at large: for example, the fluid destined to lubricate the pleura may become sooner or later more completely defective than the secretions of other parts, and, by its irritating nature, cause a determination of nervous influence to that texture, before the imperfectly secreted products of the skin can, by irritation, elicit a determination to the surface; or, though this fluid may not become more defective than other secretions, the pleura, owing to former lesion or other causes, may be more sentient than when perfectly sound, and consequently more obnoxious to irritation; in either of which cases inflammation of that membrane will manifest itself at the commencement of or during the three first days of the second stage. On the other hand, a part may be defective in such a manner as to be less sentient than when sound, or than other parts, and which, during the three first days of the second stage, may attract no particular attention; but, when nervous energy in general begins to decline, then will the energy of this part decline in a greater ratio, or, in other words, this part will lose tone sooner than other parts: hence will follow that topical inflammation termed "subacute inflammation," being sanguineous congestion owing to want of energy in the part. To illustrate more fully,—there is a state in which the system is rendered highly susceptible of impression from a typhoid miasm, attended with local circumstances which dispose the disorder to assume an inflammatory form: I mean the puerperal state. The excitement attending parturition soon gives way, and is followed by the debility of exhaustion, in which condition the slightest morbific agent is sufficient to involve the system, which but a few hours before might have opposed a causation of tenfold greater force.

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* Bostock.

The disease is ushered in by a cold fit, during which the secretions are imperfectly produced, and as with puerperals there is one texture, the peritoneum, which may be regarded as in a morbid state, we at once can pronounce the cause of its being the seat of inflammation. The peritoneum, during its extension, must have its vessels and nerves either enlarged or multiplied, or both: therefore, when relaxed, it must for a time be supplied with a greater force of nervous influence and a greater quantity of blood than is necessary: hence it is more sensitive, and the exhalation from its surface more abundant, than necessary. In this condition is the peritoneum more liable to be irritated; but the superabundant secretion from its surface becoming imperfect, in common with the other secretions of the body, acts like foreign matter applied to its whole extent, and involves it in inflammation before the irritation on the other textures of the body can determine general reaction. Indeed, in some cases of the true puerperal fever, where the severity and extent of the peritonitis are great, we may look in vain for general reaction; the determination of nervous influence to the irritated or inflamed surface being so powerful that nothing can divert its course: hence the languid energy in other parts, giving rise to the "pellucid eye, the pale and shrunk countenance, the indescribable expression of anxiety."

Before I leave this part of my subject, let me call your attention to the nature of the heat, or rather the sensations which accompany the heat evolved in fevers. I am sure you will at once agree with me, that it is a heat depending on irritation in the part in which it is felt; and, as a proof of this, it may only be necessary to quote a few of the adjectives employed by authors to denote that it is a heat of no common kind: for instance, we have ardent, pungent, burning, penetrating, and a heat like liquid fire. As the heat in fevers cannot be the effect of increased action of the sanguiferous system, inasmuch as the former has been observed independent of the latter, neither can the inordinate action of the heart be the effect of the heat; for, in like manner, inordinate action of the heart has been felt unaccompanied by heat such as is experienced in fever. When reaction in general is taking place in consequence of irritation from the imperfect secretions throughout the body, and particularly of the skin, there can be little doubt but that the heart will suffer an increase in its action; but I suspect that the inordinate action is attributable to the absorption and commixture with the blood of the imperfect products of secretion.

In this stage (of excitement) commence those symptoms which led to the idea that fever is an effort to expel something hurtful, either ingenerated or introduced from without. Such was the opinion of HIPPOCRATES, of GALEN, and of SYDENHAM; and it is a pity that this hypothesis, which stood the test of so many ages, should have been at length neglected, or that physicians should have been blinded by the ingenious but unsubstantial speculations of later days; for, although the disease does not originate from a morbid change either of the blood or fluids secreted from it, yet a change in the latter does take place in consequence of a prior morbid action; and it is this change, and the action which follows as effects, that give form to the disease, and entitle it to be called Fever.

The doctrine of the Greek school was derived from observation, and it is one which would naturally follow, from "beholding a violent commotion in the system followed by an evacuation from the skin and kidneys, with which the paroxysm terminated." It would seem that one objection to this hypothesis must fall to the ground if we could in any plausible manner explain how morbific matter is generated internally; for Dr. Good says that there are many fevers produced evidently by cold, fear, and other excitements, as well mental as corporeal, in which most certainly there is no morbific matter introduced, and wherein we have no reason to conceive there is any generated internally; while the disease, limited perhaps to a single paroxysm, closes nevertheless with an evacuation from the skin or kidneys.

Now, in such fevers, the first effect of the remote cause is impaired nervous energy; there is a cold stage, during which the secretions are disturbed, whereby we have great reason to believe that imperfect products are formed, which, though not morbific, are morbid and generated internally, and which, being absorbed, are thrown from the system through the skin, kidneys, or bowels. As fevers have been known to have been suddenly cured by a hemorrhage so moderate in quantity as to be incapable of carrying out any considerable portion of matter diffused over the whole mass of blood, and as Dr. Good cannot conceive how such diffused matter can collect itself at a focal point, or pass off at a single outlet, he considers the hypothesis incorrect. When, however, foreign matter is purposely introduced into the system, we are witnesses to the commotion it excites, and the animal only recovers after some critical discharge. With regard to not conceiving how offending matter can collect itself at a focal point, or pass off at a single outlet, I would ask if it were more preposterous to suppose the blood-vessels endowed with a power of casting from them that which is offensive, than absurd to give to the lacteals the power of selection or rejection; yet no one disputes their possession of such power. That there is a law in the animal economy which determines offending matter to the points irritated, I think cannot be denied, for in our daily practice we behold the effects of its operation; but to explain how it operates may be a difficult task. If, from whatever cause, menstruation be suddenly checked, how often then do we see erysipelatous inflammation follow an incautious exposure to cold; and is not erysipelatous inflammation in every instance caused by a deposition of irritating matter from the blood. It is said that wounds of the pericranium are oftener followed by erysipelas than other wounds, but it does not follow, as is supposed, that erysipelas obtains in consequence of the pericranium being wounded. In most cases, a blow sufficient to wound that membrane is concussive enough also to derange the operations of the brain: hence for a time the secretions are imperfectly produced,—they are absorbed and deposited round the wound, the point irritated. If the concussion be violent, and the operations of the brain for a longer time deranged, then the secretions become so vitiated that, before they are absorbed, they irritate generally, by which reaction is brought about, and the absorbed offending matter is at length gradually discharged from the wound in the form of pus. When concussion proceeds from violence not producing lesion, then is there fear of irritation or inflammation of the brain or its membranes; for, there being no wound or external irritation to which the absorbed offending products can be determined, they are attracted towards the brain, the seat of the injury, and there produce irritation and inflammation: or, as in fevers, it may be thrown off by a critical discharge. Indeed, I very strongly suspect that that form of fever denominated "sympathetic" is also an effort of the system to throw off something hurtful generated internally; or, I would rather say, is produced by offending matter circulating with the blood. For, if irritation from an external cause be continued, nervous influence is directed in particular to that part, and inflammation is the consequence; but whilst so great a force of influence is directed suddenly to one point, other organs or textures are, on that account, proportionally deprived of it, and consequently the secretions of such parts become imperfect, are absorbed, and give rise to the fever. Here there is offending matter which must be thrown off. If it be thrown off by the bowels, kidneys, or skin, we have that termination of inflammation termed "resolution;" but it oftener happens, where the inflammation is severe, that the offending matter is determined to the inflamed point, and deposited there in the form of pus: hence suppuration ought to be regarded rather as the crisis of the fever, than a termination of inflammation. Is not menstruation itself a strong proof that the system has the power of collecting offending matter at a focal point, or of discharging it at a single outlet; and that this power is not confined to one part, or particular structure, is evident from the fact that, by irritation, the menstrual discharge can be diverted from its natural channel. We have many instances on record wherein it has made its exody by an ulcer on the leg or arm. If irritation, then, such as is produced by an ulcer on the leg or arm, can withdraw a discharge from its natural channel, need we be surprised that, when offending matter is circulating with the blood, that irritation should determine its outlet?

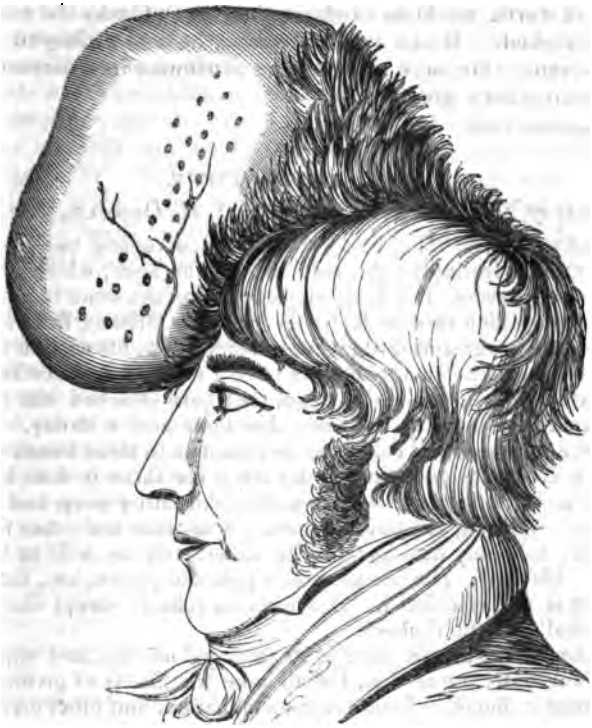
The increased energy which marks the second stage generally begins to decline on or after the third day of it; after which time (provided there be no local determination of nervous influence, caused by an irritation greater than that which a few leech-bites might create,) I have frequently seen fevers yield to an hemorrhage caused by two or three leeches applied as near as possible to the same spot; or to the hemorrhage from one bite promoted by a cupping glass. If benefit be therefore derived from the loss of so small a quantity of blood, we must impute the favorable result to the nature, and not the quantity of blood lost. Indeed, the effects of leeches at a certain period in fevers, have often been so favorable as to excite amazement even in the practitioner; and, in some cases, so efficacious has the operation been, as to induce some to believe leeches possessed of endowments beyond drawing blood. If we examine the action of some of our favorite remedies in fever, we may trace the benefit derived from them to their establishing an outlet for offending matter. Cathartics, administered daily during the first stage, not only empty the gut, but, by keeping up increased intestinal action, they secure a drain or outlet for offending matter; and hence the cause why the early administration of cathartics, for the most part, insure a short second stage.

Although I set out with the determination of meddling as little as possible with the opinions of others, I cannot help stating that I think it is the presumed *modus operandi* of cathartics that has led to the idea that fever, in its first stage, is an affection of excitement. The evacuant plan, as it has been called, is supposed to be productive of benefit by clearing the gut, and by lessening the volume of the circulating mass. After a brisk cathartic given in the first stage, the patient may, and often does, feel renovated, while a person in health, after a similar dose, feels exhausted: hence it is argued, if fever be an affection otherwise than of excitement in its first stage, the patient's feeling, after a cathartic, would be that of increased weakness. Impaired energy of the brain from a febrific miasm, does not imply an exhaustion of nervous influence, such as follows great bodily fatigue; the sensibility and energy of the brain are obtruded, by which it cannot sufficiently acknowledge the usual impressions which regulate its operations: requiring, therefore, stronger impressions to rouse it to action, it is in a manner paralysed. The first effect of a cathartic is irritation of the gut, and this impression, being stronger than that produced by the natural irritants of the canal, is acknowledged. The brain being thus roused, nervous influence, though in particular directed to the gut, is diffused throughout: hence the patient feels himself renovated, and it is diffused throughout, because the brain, being roused, becomes again more sensible to the natural impressions throughout the body. It is this feeling of renovation after a purgative in the first stage, conceiving it to be produced by a diminution of the circulating mass, which I think, with great deference to so high authority, led Dr. Armstrong to view fever as an affection of excitement in its first stage, and to consider the nervous appearances, even from the first attack, as only secondary to vascular disorder. That vascular disorder will occasion nervous appearances, cannot be doubted; for we know that the vascular and nervous systems are positively dependent on each other; but that the vascular system should become deranged, unless as an effect of nervous derangement, I cannot believe. I have imputed rigors to sanguiferous congestion, and therefore that nervous symptom I conceive to be secondary of vascular disorder; but I hold that retrocession of blood from the surface and internal accumulation can only happen in consequence of nervous disorder. Dr. Armstrong maintains that the debility in the first stage of typhus is chiefly dependent upon preternatural accumulation of blood in the vessels about the head, heart, liver, and other internal parts, and that this debility is only apparent. But general internal accumulations of blood can only happen in consequence of debility and lessened irritability of the vessels themselves. In the first stage of fever, the state of the surface of the body shows that debility extends to the small vessels of the skin, which, if it were confined to those vessels alone, instead of manifesting itself in an empty state of the vessels, would do so in a state of engorgement; for the heart and larger arteries, continuing in a state of vigor, would propel the blood into them as usual, whilst they wanted the power to forward it. This vascular debility, however, being general, atmospheric pressure determines the internal accumulations; therefore these accumulations, however much they may increase debility, are themselves depending on it.

With regard to the debility of the body being apparent, it is, in my opinion, as direct as if it were the consequence of exhaustion; for the debility in the first stage of fever depends on nervous influence being withheld; debility from fatigue depending on its being exhausted; the cause of debility in both instances being the want of nervous influence. Yet there is a difference, and a very material one in a practical point of view, and that difference lies in the state of the brain. The debility depending on influence being withheld may be soon removed by whatever rouses the brain into action, while that depending on exhaustion is increased by attempts to rouse the energy of the brain. When general reaction takes place, the internal accumulations are removed, and still the debility continues.

Having imputed the debility to vascular disorder in the first stage, Dr. Armstrong thinks it necessary to blame vascular disorder also for the second stage, although the disorder in the first stage plainly consists of want of excitement in the heart and arteries, and in the second stage of over-excitement. It certainly in both stages depends on the same cause, viz. diminished transmission of nervous influence.

This cause of debility may seem as paradoxical as vascular disorder, since in the first stage nervous influence is evidently withheld, and in the second stage it is as evidently transmitted in greater than natural force. But, though thus transmitted from the brain, it is still withheld from the muscular apparatus; for, owing to the superior sensibility of the skin, the surface of the body is the part first irritated by its imperfectly secreted products, and consequently the determination of influence is to the surface: for the same reason is it withheld from the gut, and hence the constipation which generally accompanies the second stage.



TUMOR.

Case of large Tumor on the Forehead.

By Henry Thompson, M.D.

James Lipscombe, aged forty-six, a waggoner, has had a tumor on the forehead from his birth, which has never given him pain: at first it was the size of a nut, and has not, he says, increased very materially until within the last six years, nor did he require a hat of more than the usual dimensions. Within the last-mentioned period, the tumor has increased to a very distressing degree, causing him much pain in the neck from its weight, and has attained the following dimensions: —two feet four inches round the base, three feet round the widest part, and two feet four inches across. When I last saw the patient, about six months ago, the tumor appeared to contain fluid in some parts of it. On inquiry, I find he is still living, and continues to come twice a week to the Talbot Inn in the Borough:* should any of your readers, therefore, think it worth while to examine the case, it may be readily accomplished. When I last saw him, he was willing to have it removed. He says, his mother attributes its existence to her longing for a goose's egg.

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* I am not quite sure of the name of the inn, but think it is the Talbot.

February 20, 1828.

TERTIAN INTERMITTENT.

Case of Tertian Intermittent. By H. R. OSWALD, Esq.

JANUARY 12th, 1828, 2 P.M.—Hugh Caton, ætatis twenty-one, mariner; is shivering in the cold stage of an ague, which proves uncommonly severe. Has been subject to fits of the same kind since July last, at which time he had a fever at New Orleans, from which he did not recover during the voyage home. The fits used to come on at irregular intervals, generally once a week; but since he arrived at Liverpool, two months ago, they have attacked him regularly every second day, between this hour and mid-day. The general duration of the cold stage is from two to three hours, after which it is succeeded by a hot dry fever for three or four hours more; and the fit passes off towards midnight by sleep and perspiration. During the intermissions, his appetite and other functions are tolerably healthy; but he never feels so well as to be able for his duty. His complexion is pale and yellow, but, though thin, he is not emaciated. Has used no remedy except chewing occasionally a little rhubarb.

As the history of this case is its principal novelty, and appears to me unusually interesting, I shall take the liberty of giving it a good deal in detail. From cross-examination, and other credible reasons, I have no doubt the following is correct.

On the 12th of April, 1827, Caton sailed from this port in the brig Hardwell, of Ayre, James Weddell, master, and ten men, with a general cargo for the Gulf of Mexico. They made the River Tampico, which they entered about the 3d of May, all well. When at anchor in the bay, lightening the cargo, three or four days after their arrival, the master, James Weddell, was seized, about two P.M., with great pain or cramp in the stomach. About three P.M. had incessant vomiting, and, after a severe night's suffering, died the next day at noon. The master was said to have died of the black vomit. He had been on shore upon business, but only for a few hours at a time. About the middle of July, the vessel sailed for New Orleans, in ballast of dry white gravel and sand; and arrived there all well after a week.

They lay three weeks at New Orleans, abreast of the market-place, and near banks of mud, gravel, and hard clay. During the first week, the mate and the second mate, and a lad sixteen years of age, were taken ill of what was called there "the fever." In about a week, all three were able to be on deck again. In the second week, my patient and three other men, Brown, Hansel, and Newton, were sent down the river in a boat to fetch the hawser, which, from the brig getting foul of a steam-vessel, in coming up, had been left on the banks of the river. They left the vessel about nine P.M., and were out all night at work, in consequence of the hawser having become intricately entangled amongst the trees and mud on the margin of the river. They had a hard row up to the town next morning, under a burning sun. All the boat's crew began to feel themselves fail very much after the sun got up, so that they were hardly able to row the boat back again to the vessel; and, when they did arrive, were unable to put the hawser on board. Headache came on about noon, with overpowering lassitude. Soon after my patient passed into a high fever, during which he cannot describe his symptoms, excepting the severe vomiting, with pain in his right side. After about a week, the fever began to abate; but he continued subject to shiverings occasionally.

Brown, Hansel, and Newton, and subsequently another man named Kaye, were sent ashore to the hospital, whence, except Hansel, they never returned. Knows not the reason he was not sent ashore with them, except that he was considered not so ill, and at the time none of the crew were well, although most of them were able to move about on deck. They all had headache and vomiting, and some of them were yellow. All those that recovered became yellow as the first violent onset of the disease began to subside. My patient is still very pale, and of a dingy yellow complexion.

After remaining at New Orleans three weeks they left it, when not one of the remaining part of the crew was in proper health. After getting into the Gulf of Mexico, they remained a month at Cayes West, in consequence of the vessel running aground. Two more of the men went ashore at this place, where he supposes they died. But, notwithstanding this delay, those remaining on board did not recover, but continued quite unfit for duty all the voyage home. The vessel was navigated home by the crew of a vessel lost in the Gulf, which they took on board at Cayes West. None of this fresh supply of men had any sickness in the passage. The old crew, five in number, continued subject to cold fits, pains in the sides, swelled legs, lassitude and debility. The carpenter, in particular, suffered from erysipelas in his right ankle, and went into the infirmary when they arrived at Liverpool. My patient distinctly states he had a severe rigor once a week, generally on Sunday; and that the disease did not assume the tertian type till his arrival at Liverpool and this island in the beginning of November last; but more especially after exposure to wet, when he first returned to Douglas; since which time the fit has come on regularly every second day about two o'clock.

After evacuating the contents of the stomach and bowels well, he was directed to take a teaspoonful of the Bark every three hours. The approach of the fit was also checked by a dose of Tinctura Opii; and after ten days the cure was complete.

Remarks.—I shall refrain from entering into a recapitulation of the authorities which suggest the probability of an affinity existing between some of the fevers of the old continent and those of the new. The opinion that affinities do exist between many diseases apparently dissimilar has gained ground lately, but it is by no means a new doctrine. The foregoing statement furnishes direct evidence, pointing us to reflect on an affinity between the fever of New Orleans and the intermittents of our latitudes. If we could be quite certain that this case of ague did not originate after my patient's arrival in England, we have a demonstration, almost irrefragable, that such an affinity actually does exist; for in it we distinctly trace the fever of New Orleans, (the yellow fever,) passing into the ague of Europe, merely from the change of climates and the operation of time.

But if the history of the crew of the Hardwell is not considered sufficient evidence that the disease under which my patient laboured in the Isle of Man originated in the River Mississippi, but came on from an exposure to a new cause after his arrival in England, the foregoing statement at least illustrates the history of both ague and the yellow fever, in so far as it proves that the latter increases the susceptibility of the human body to the attacks of the former: a circumstance opposed to the doctrine of dissimilar diseases being antidotes to the attacks of each other in general. It may also be questioned whether the fever which my patient had at New Orleans was the yellow fever, or simply a remittent? The reply must rest on evidence upon which controversialists in the philosophy of medicine would not, perhaps, implicitly place much confidence,—viz. on the account of a young man given from memory. But, though a novice in such matters, many of the principal symptoms of the first attack are stated sufficiently correctly to warrant us in considering the disease which killed so many of the crew of this vessel, and disabled the whole of them, to have been no other than the yellow fever.

Douglas, Isle of Man.

STOMACH AND INTESTINES.

Inquiries into the Healthy and Diseased Appearances of the Mucous Membrane of the Stomach and Intestines. By W. E. Horner, M.D. adjunct Professor of Anatomy in the University of Pennsylvania.

(Concluded from page 217.)

In speaking with Dr. Physick on the affections of the stomach, he told me that his experience led him to think that the highest grades of its irritation were attended neither by pain nor vomiting. The state of inflammation is so exalted, that its effects approximate those of the most deleterious poisons, which cause sudden death without local pain, fever, or any very sensible derangement of the functions, except mere weakness and a sense of illness. The following instance will illustrate this:

Observation 6th.—Acute Gastritis.—Henry Turner, a black man, aged fifty-five, assistant in the apothecary's shop at the Alms-house, after an apparently slight indisposition of a few days, which seemed to require rest rather than any thing else, while sitting up in his bed, suddenly expired almost without a struggle, May 4th, 1827. On dissection, twenty-four hours afterwards, the stomach was found of middle size, thick and dense, its mucous coat thrown into numerous, well-marked, elevated rugæ, and almost universally of a deep arterial red; the red globules of blood were extravasated in numerous spots and blotches in the thickness of the mucous coat and along the summits of the rugæ. This was a patient of Dr. Hodge, and I witnessed the dissection by chance. I declared unhesitatingly that the disease was an exasperated inflammation of the stomach, but, owing to the want of an assignable cause for it, as well as the want of appropriate symptoms during life, the opinion was not very readily acquiesced in. In a few days afterwards it was ascertained, through Mr. Marks, the apothecary at the Alms-house, that Turner had been taking private draughts from the bottle of Hoffman's Anodyne: at least, the quantity missing could be accounted for in no other way.

Observation 7th.—Chronic Peritonitis and Gastro-enteritis.—Alms-house, July 26th, 1827. Examination twelve hours after death.

John Neaman, aged seventy-seven, has been for two years a resident of this house. For the last nine weeks has complained of want of appetite, a sense of fulness over the abdomen, and pain in that region, but not so severe as to make him complain, or disquiet him much. Has had no diarrhœa, no vomiting, and no fever which called the attention of persons around. Eight days ago, the little food which he was in the habit of taking produced such a sense of fulness and distress that he determined to take no more, or at least the smallest possible quantity: since then he has taken a little bread, and now and then a spoonful of milk. His complaints being obscure, there has been no medical treatment within these eight days, and scarcely any before. At a distant time, which is not precisely remembered, some tincture of bark was administered by one of the young men of the house. He died seemingly from exhaustion.

Exterior habit: Skin pallid as usual after death; marasmus not exceeding that common at his time of life.

Abdomen: Peritoneum rough, with universal small miliary bodies, resembling tubercles, thickened somewhat by a coating of coagulating lymph, continuous with the tubercles. Peritoneum, on abdominal muscles and also on diaphragm, interspersed with patches of red blood; small coagula of blood adhering to its interior in many places, and abundant points of the same, as if from ruptured vessels; its cavity contained about three quarts of fluid, half serum and half blood blended, coagula of blood floating in this mixture. Mesentery studded at distant intervals with these small points of blood.

Stomach: Exterior or peritoneal aspect, pallid and healthy. Internal condition—contained no food, and a little mucus tinged with bile; cardiac termination of mucous coat of œsophagus of a deep red, from distinctly injected vessels; the whole mucous coat interspersed at somewhat distant intervals with small black spots of extravasated blood, from half a line to one line in diameter: for three inches around the pyloric orifice, these spots were more abundant and larger. Small intestine: mucous coat healthy, but the peritoneal coat of the colour of lampblack in many parts, and more or less of a sooty hue in its whole length. Large intestine: exterior or peritoneal face healthy, but dull from the disorganization beneath it. Mucous coat covered with black patches of blood extravasated in its thickness and beneath it: it resembled very much the spotted appearance of some of the sea-shells, and contained a small quantity of hardened fæces; small miliary bodies, like those on the peritoneum, abounding in it, but I could not distinguish whether they were mucous glands, or such tubercles as existed on the peritoneum. Liver, small and flabby. Spleen, natural.

The following are examples that redness is not found invariably in those exalted irritations of the stomach producing immediate death.

Observation 8th.—Gastric Irritation.—Jan. 28th, 1827, the daughter (aged eight months) of Mrs. A. D., without previous indisposition, and while playing in apparently excellent health on the lap of her aunt, was taken with a sudden spasm, and died instantly. This occurred after a hearty draught of cow's milk, on which the child was accustomed to feed.

The day following I made an examination, twenty-four hours after death, with Dr. James, the family physician, and the following appearances were presented:

Head: The flat bones much tinged with congested blood; the veins of the pia mater turgid. Serum under tunica arachnoidea; a drachm of serum in the right ventricle of the brain.

Thorax: Every thing natural.

Abdomen: About one gill of a cheese-like coagulum of milk in the stomach. The serous part had been continually running out of the mouth and nostrils since the death of the child, so as to require the constant use of cloths to soak it up; the quantity, therefore, could not be rigidly estimated, but probably did not fall short of two gills. The mucous coat of the stomach was not vascular, but of a pearl colour.

All the mesenteric glands were very much enlarged, but had nothing of a scrofulous consistence or texture.

The child, owing to the ill health of the mother, had been weaned at the age of one month, and brought up on cow's milk. That the coagulum formed from the latter was indigestible, perhaps from its quantity, is proved by the fact that pieces of it, tinged slightly with bile, were found in the lower part of the jejunum. It is pretty clear in this case that the undue quantity of coagulum in the stomach was the cause of death.

Observation 9th, March 29th, 1826.—*Gastric Irritation.*—Yesterday the infant daughter (aged ten months) of Mr. W. H. was seized, in a short time after eating half a table-spoonful of rice-pudding, with convulsions. The insensibility was complete, and the spasm universal; respiration was carried on with the greatest difficulty, irregularity, and interruption. This was at half-past four o'clock P.M. Happening to pass the house almost at that instant, my assistance was requested. In a few minutes, Drs. Hodge and Griffith arrived.

A warm bath was immediately resorted to. Three grains of tartar emetic were dissolved in a wine-glassful of water, and administered by the tea-spoonful every five or ten minutes. The attempt to raise a vein in the arm being ineffectual, I opened on the right side of the head three superficial veins, and on the left side two, along with a branch of the temporal artery. From these several openings about three and a half ounces of blood were drawn. About three-fourths of an hour were thus consumed, when the convulsions ceased. As the infant was teething, the gums were then cut with a lancet.

The child was an unusually fine one; had, to the moment of illness, enjoyed most excellent health, and had, indeed, been out on a visit to its friends that very morning. The indication seemed, therefore, sufficiently marked that the rice-pudding, along with a prune which had been eaten in the morning, was the cause of the convulsions, and that these matters, if possible, should be expelled from the stomach.

As, notwithstanding the cessation of the convulsions, the insensibility and difficult respiration still remained without much mitigation, about twenty-five grains of Pulv. Ipecac. in three tea-spoonsful of brandy, were administered in divided doses, at small intervals of time. This not producing the desired effect, a tea-spoonful of powdered mustard was given by portions, which also failing, twelve grains of Sulphate of Zinc were next given in divisions. This also failing, we next resorted to tickling the fauces with a finger, and to the introduction of a feather down the oesophagus, almost to the cardiac orifice of the stomach, some five or six times: still there was no vomiting induced. These several trials occupied until eight P.M. when the child revived very much, and was able to sit up.

It should also be mentioned that sinapisms had been, during our efforts, applied to the soles of the feet and to the epigastrium; and that two or three injections of spirits of turpentine had been administered, with the effect of purging as often.

About ten o'clock P.M. the infant seemed to recognise persons, smiled on being addressed in a soothing, playful manner, and afforded a prospect of recovery. At half-past twelve o'clock at night, after a slight convulsion, it died.

Autopsy, seventeen hours after death, the weather being moderate, and no putrefaction.—Abdomen: Stomach flaccid and of the middle size, contained the rice pudding undigested, with a small part of the skin of a prune; its mucous membrane of a light pink colour. The mesenteric glands were enlarged and numerous. The child had been fed occasionally with cow's milk.

Dr. Physick informed me that he had saved a child, affected in a similar way from eating a piece of pear. During the prevalence of the convulsions, the child not being able to swallow, a large quantity of tartar emetic and ipecacuanha was injected by a syringe into the stomach, through a catheter introduced down the throat: the piece of pear was thrown up by vomiting, and the child saved. He also told me that Mr. L. once lay in a stupor for several hours, from swallowing some article of food extremely difficult to digest: he also was relieved by its expulsion.

Observation 10th.—Softening of the Stomach.—In the summer of 1825, I dissected, for Dr. Otto, an infant child (about two years old) of Mrs. S. S., who was unwell for a week, without there being any well-marked symptoms of the nature of its disease. I found the left extremity of the stomach disorganised in all its coats, having been reduced to a light mahogany-coloured and pulpy state, about the consistence of a piece of glue soaked in cold water for twenty-four hours. Having no suspicion, at the moment, of such a state of the organ, I lacerated it inadvertently while only using a common force in drawing it upwards for examination. There was no undue redness in the mucous coat.

The brain of this child was large and somewhat congested, but not to a remarkable degree.

Observation 11th.—Softening of the Stomach.—Dr. La R. of this city, lost a child, in 1826, about four weeks old, in whom I found the stomach in a similar state of dissolution or softening. There had been, however, much pain in his infant, and flatulent tension of the abdomen.

These observations upon the stomachs of children, illustrate sufficiently the fact that the most extreme irritations of the stomach may exist during life, and may even be fatal, but yet not be manifested after death by unusual redness of the tissues affected. It would be indeed unphilosophical, and inconsistent with pathological observations on other parts, to exact from the stomach an invariable manifestation of disease, by redness and injection of its mucous surface after death. Let the redness of the skin in erysipelas be ever so strong during life, it frequently disappears wholly, by the retreat of the blood from its capillaries during death. Measles are similar in this respect, and the fact already mentioned is very worthy of attention, that if a fine injection be thrown into a subject who has died at the height of the eruption, the vessels originally dilated by the irritation manifest themselves by the greater quantity of injecting matter they receive: or, in other words, the eruption may be renewed after death, as I have satisfactorily ascertained by experiment. If any conjecture could be hazarded on these points, we are disposed to believe that, during the process of death, the vitality of parts in a state of inflammation is frequently so far diminished that they no longer have the power of attracting the fluids in undue quantity to them; consequently their redness disappears.

Acute inflammation of mucous tissues generally only thickens inconsiderably the part affected. It is attended by an increased secretion of mucus, of serum, of fibrino-mucous matter; and even an exhalation of red blood, from the blood-vessels being so extremely superficial. We see continually these phenomena going on in inflammation of the Schneiderian membrane and in colitis.

It has been seen that if an acute inflammation of the gastro-intestinal mucous membrane does not kill in its early stages, the injection with red blood is frequently by no means so great as it would have been in the case of an earlier death, and the changes which I have generally observed are as follow:—The stomach and bowels assume a dirty yellow or liquorice colour; the stomach presents internally small blotches of red at intervals, and frequently are found small filaments of coagulated blood adhering to the mucous coat of the stomach, seemingly at the orifices of the vessels from which they were discharged. The veins of the bowels are either partially or generally filled with blood. The intestinal mucus is abundant, adheres closely, and is tinged yellow by the bile. The mucous membrane of the stomach is easily peeled or scraped off by the finger-nail. The brain in this state most frequently exhibits marks of congestion, and with some inflammation of its meninges. The eyes and skin are yellow. In the skin there are apt to be left blotches of red blood, resembling purpura.

Yellow Fever.—In my notes of dissections performed on four yellow-fever patients, in the year 1820, I find the following remarks: In a female patient, aged forty, whose period of the disease I did not learn, the stomach contained a gill of black vomit, was of a natural thickness and texture, and presented over its whole mucous coat, in different regions, patches or blotches of extravasated blood. In a seaman belonging to the brig Martha, who had been sick at least nine or ten days, the stomach contained also black vomit, and was beset with small red points and spots of ecchymosed blood. In a third patient, a man aged forty, who complained slightly in the morning of one day, and was dead the next at seven o'clock A.M., I found the stomach extensively ecchymosed in its mucous coat, and its veins distended with blood; the black vomit was in great abundance in the stomach and intestines. In the fourth patient, a girl aged fourteen, who died on the fourth day of the disease, the mucous coat of the stomach and small intestine did not present the appearance of ecchymosis, but merely a minute arborescence of its veins.

Observation 12th.—Acute Gastritis.—During the month of July of the year 1826, I lost a patient, John Henderson, aged about sixty, from a violent remittent fever of about eight days' duration, attended with great prostration of strength, tenderness in the epigastrium, irritability of stomach, high fever, with coma and occasional delirium; a saffron-coloured skin and black tongue attended the last days of his disease. I examined him in the presence of Drs. Hodge and La Roche. The peritoneal surface of the abdomen, and of its viscera, we found healthy; but the mucous coat of the stomach presented, in its cardiac portion, a large motley patch of ecchymosed blood, as big as the palm of my hand; it also presented smaller patches of ecchymosis in other regions. His symptoms were, with the exception of black vomit, of such intensity, that his case would, in times of yellow fever, have been set down to that disease.

The same patched appearance sometimes is extended into the intestinal canal.

Observation 13th.—Gastritis.—May 30th, 1827, I dissected Edward Bloom, aged thirty-eight, a patient in the Alms-house. After a debauched course of life of some continuance, he was brought into the syphilitic ward for a sloughing ulcer of the penis, with mortification of the adjoining skin, without any well-marked sympathies, except a general prostration of his intellectual and physical powers: he died in five or six days after his admission.

Though there were no prominent gastric symptoms, as extreme irritability of the stomach, tenderness in the epigastrium, &c. we yet found the left end of the stomach; the jejunum, and the ascending colon, in a patched ecchymosed state, with here and there mahogany-coloured spots along the intestinal tube, arising from the collection of blood. The yellowish, semi-putrescent tinge, which the intestines under such circumstances are apt to have, was also present.

From the liability we are in to confound the redness of the stomach indicative of its inflammation during life, with the redness depending upon an obstruction to the circulation during the agonies of death, a principal object of the preceding pages has been to point out their difference, and to establish the important fact of gastric inflammation in most of those cases where the redness is observed. It is now proved that the redness arising from simple congestion, like the redness from injection, is uniformly diffused; whereas the redness from inflammation is generally partial and in patches, sometimes in the mucous membrane of the cardiac extremity of the stomach, and sometimes in that of the pyloric extremity.

Simple obstruction to the current of blood during the agonies of death could never produce such appearances; for, if it could, we ought to meet with them invariably. On the contrary, where an obstruction does occur, which I am disposed to believe is very uncommon in natural death, whether this obstruction arises from the liver or from the lungs, the arrest of blood should be manifested by an uniform tinge of red in the organs concerned, and not by patches here and there. Such marks of obstruction should also be more frequently seen, and better developed, in cases of enlarged indurated liver, in consumption, in dropsy of the thorax, and in all cases of obstruction of the lungs.

HOSPITAL REPORTS,

(Principally condensed from various Periodical Publications.)

DISEASES OF THE JOINTS.

Case I.—*Rheumatic Inflammation, terminating in Ulceration of the Cartilages.*

Sarah Holder, ætatis twenty-two, was admitted into St. George's Hospital, July 26th, 1827, under the care of Mr. Brodie, with swelling extending from the upper part of the right thigh over the knee, for some little distance down the leg. This swelling was by no means circumscribed, but its principal seat was evidently in the lower part of the thigh and knee, above and below which it gradually passed away. It was tense, elastic, exquisitely painful on pressure, and of a glossy white, looking as bloodless as the limb of a statue. She could not bear any motion of the knee, but still the pain excited did not appear to be so much in the joint itself, as in the parts around and about it. The pain and swelling had attacked her suddenly the day before, without any precursory shivering or feverishness whatever. She had received no injury to her knowledge, nor had she been particularly exposed at the time to wet or cold. She had, however, been subject, for a month or more, to rheumatic pains in the elbows and shoulders, and was leading a life of prostitution.

The skin was hot and dry; tongue coated, and brownish in the centre; pulse eighty-four; bowels confined; countenance expressive of much suffering.

The local treatment consisted of an alternation of leeches and blisters; the constitutional, at first of saline purges with antimony. and, after a few days, the exhibition of calomel and opium, until the mouth became affected. Under this plan the pain was considerably relieved, but never entirely dissipated, whilst the swelling of the upper part of the thigh and leg almost wholly subsided.

In this state she was removed, with the other patients, to the opposite side of the house, in consequence of some arrangements connected with the new hospital, soon after which she was seized with fever. The swelling of the knee and parts around increased, and the pain was greatly aggravated. There were hectic symptoms, and the constitution now began to suffer. She was kept gently under the influence of mercury, and a succession of blisters was applied to the knee.

On the 6th of September, the calomel was omitted, in consequence of violent purging. Pil. Saponis cum Opio, blisters, leeches, Belladonna fomentations, Belladonna plasters, and lastly a caustic issue to the knee, were employed, sometimes with temporary, but never with any permanent relief. The disease in the joint went on from bad to worse, and the sufferings of the patient were so excessive that her screams could be heard from one end of the ward to the other. An ulcer formed over the sacrum, and somewhat relieved her; for, in proportion as this got worse, the pain in the knee got better.

On the 15th October, bilious vomiting and diarrhœa, with great tenderness of the abdomen, came on; and, at seven P.M. on the 16th she died, worn out with suffering.

Dissection.—On cutting into the knee-joint, not a particle of purulent matter was found in its cavity, but the cartilages of the condyles of the femur (particularly the inner one) of the head of the tibia, and of the patella, were in a state of ulceration, exposing the cancellated structure of the bone beneath. An incision was made into the thigh, but its tissues were unaltered, there being no thickening whatever of the periosteum.

CASE II.—Sarah Mooley, æt. thirty-seven, was admitted into St. George's Hospital, December 12th, 1827.

On the 1st of the month she was seized with pain in the left knee, which swelled a good deal in the course of that night. During the whole of next day she suffered considerably, and in the evening was attacked with fever. She now applied a poultice and fomentation, and on the 4th was seen by the parish surgeon, who ordered eight leeches to the knee, and gave her some medicine. At the time of her admission, there was the same train of symptoms and appearances as have been described in the preceding case: there was the same diffused swelling, still however concentrated about the knee; the same want of œdema; the same exquisite pain on pressure of any part, or motion in any way. The limb, as in the former instance, had that peculiar opaque and marbled whiteness, which made it look as if it belonged to a statue rather than a living person, but the integument was neither so glossy nor so tense. There was great pain, independent of pressure, shooting from the knee down to the toes, and up to the groin; it was not aggravated at night; it was worse when the limb was hot.

The patient was a washerwoman, and of an extremely delicate, scrofulous aspect; appetite bad, pulse quick and irritable, countenance flushed and anxious. Leeches, lotions, &c. were employed; and on the 17th she was ordered Calomel and Opium, with Colchicum in Camphor mixture.

The limb now became more inclined to be œdematous; and, on the 18th, the swelling of the thigh was perceptibly diminished, whilst the leg was swollen to the instep, and distinctly œdematous. Tongue dry and chapped; mouth parched; pulse quick and hard; much anxiety of countenance.

On the 21st, the Calomel and Opium were omitted, and she was ordered

> Hirudines xij. genu.—Cal. gr. ss.; Pulv. Ip. comp. gr. v. sextâ quâque horâ.—Inungatur fem. Lin. Ammon. fortius.

The leeches were repeated on the 24th, 28th, and 31st; and a lotion, containing two drachms of the Tinct. Belladon. to the pint, kept applied to the limb.

14th.—Leeches have been again applied, and she has been taking the Haust. Salin. with Vin. Ant. and Magn. Sulph. for the last week. In consequence of excessive nausea, the medicine is to be omitted. She is suffering excessively this afternoon from the pain, which shoots from the knee up and down the limb. She gets little rest at nights, but has no very decided hectic symptoms.

Disease of the Elbow-Joint, with Removal of Part of the Bones.

A GIRL, nineteen years of age, bearing the scars of an old scrofulous affection upon the back of the left hand, was admitted at LA CHARITÉ with a white swelling of the elbow-joint, with great enlargement of the soft parts, caries of the extremities of the bones, and several fistulous openings giving vent to a sanious discharge. The constitution of the patient had not suffered in any great degree; nevertheless it was evident that the disease could only be got rid of by amputation of the arm, or removal of the diseased portions of bone. M. Roux preferred the latter, and the operation was performed December 9th.

The patient being placed upon her belly, and the diseased arm brought from the trunk: two incisions, two inches in length, were made along the external and internal edge of the humerus parallel to the axis of the limb; these incisions reached as low as the joint. A transverse incision across the posterior part of the articulation joined the two former, and from these three incisions a quadrilateral flap resulted, which was detached from below upwards. The humerus being thus exposed, was isolated, by means of the knife, from the soft parts to which it was attached; a thin piece of wood was inserted between these parts and the bone, which was then sawn off just above its tuberosities. The lateral incisions were then prolonged below upon the edges of the forearm, for the space of two or three fingers' breadth; a flap similar to the first was detached from above downwards; the upper extremity of the radius was separated from the soft parts and from the ulna, and the radius was removed above its tuberosity. The extremity of the ulna was then isolated, preserving the insertion of the brachialis anterior, and the extremity of the bone was sawn off immediately below its articular surfaces: by this contrivance the lower insertions of the brachialis and biceps were preserved. The median and radial nerves included in the mass of the soft parts anteriorly were not touched, but the cubital nerve was cut, and even lost a portion of its substance. The wound produced by this operation was large, deep, and formed in indurated and diseased tissues. The edges were brought together, and maintained by fifteen points of interrupted suture; lint spread with cerate was applied upon the wound, and fixed there by compresses and a bandage. The limb was placed in a hollow splint of tin.

On the day of the operation, the patient experienced violent pain, and could not sleep on the following night. On the 10th, there was pain in the epigastrium, increased on pressure; intense headache; violent thirst; white, moist tongue; pulse moderately frequent, but hard.

Low diet and diluents were ordered.

12th, (fourth day after the operation.)—The wound was dressed. The bandages were scarcely moistened with a bloody and purulent serum; very little tumefaction of the wound. The sutures were removed, and the edges appeared united; the incisions were marked by straight lines of a red colour.

Simple dressing.—Jalap, with two drachms of Syrup of Poppies, in the evening.

Suppuration soon became more abundant, but bore no proportion to the apparent extent of the wound; the radial and cubital incisions were separated more considerably, the one at its upper, the other at its lower extremity, and discovered the opening of a sinus, which evidently led into the cavity resulting from the removal of the bones. Excepting this, every thing improved from day to day: the appetite revived, the sleep was good, and the patient recovered her spirits. After employing sticking plaster for some days, simple cerate was employed, and two pasteboard splints supplied the place of the tin case.

January 10th.—The suppuration is good, but its quantity has not much diminished; a portion of it still comes from the bottom of the wound. The transverse incision is in a great measure healed; the extremities of the bones of the forearm and arm do not meet; the cubital edge of the ring finger has regained its feeling, but the little finger may be pinched without the patient's being at all conscious of it. The patient's health is perfectly good.

This is the third operation of the kind M. Roux has performed, and they have all succeeded. One of the former patients died afterwards of phthisis; the other is still alive. No callus is formed at the extremities of the bones, they seem to be replaced by flexible fibro-cellular tissue: the forearm is moveable; it cannot be, indeed, bent or straightened at pleasure, but the patient gives it these motions with the assistance of the other hand. This man is a grinder by trade, and finds the limb very useful.

AFFECTIONS OF THE URINARY ORGANS.

CASE I.—*Ruptured Urethra.*

WILLIAM TAYLOR, ætatis forty-two, was admitted into ST. BARTHOLOMEW'S HOSPITAL, October 20th, under the care of Mr. EARLE, having fallen across the edge of a door on his perineum. Considerable bleeding took place from the urethra, and effusion into the scrotum and perineum opposite the bulb. He had not passed any urine for many hours. An attempt was made by the dresser to pass a catheter, without success; and Mr. STANLEY, who was passing through the ward, was requested to see him. After some time he succeeded in passing a small elastic gum catheter into the bladder, and some water mixed with blood was drawn off. Mr. S. distinctly felt the rupture in the urethra in passing the instrument, which was directed to be left in the bladder.

Mr. Earle saw the patient the following day, and found a tumor of the size of a large walnut rather to the left of the bulb. The scrotum was black with effused blood, but not much distended. Urine mixed with blood continued to flow through the catheter. He was largely bled from the arm, and twenty leeches were applied to the perineum.

He continued to go on favorably for some days, but on the 25th the catheter slipped out, and the patient attempted to reintroduce it, which caused some return of arterial bleeding. He had suffered during the preceding night with severe rigors and fever. Mr. Earle introduced a large catheter without difficulty, in doing which the laceration in the urethra was distinctly felt about the bulbous part. The shivering and fever returned at night, and the patient removed the catheter, which was followed by considerable hemorrhage.

On the following day he was very ill, with frequent disposition to shiver, and the tumor in the perineum had increased in size. A free incision was made through the tumor, and extended downwards towards the anus. The membranous part of the urethra was distinctly felt, but not opened, as the lacerated opening communicated directly with the upper part of the incision, and afforded a ready exit for the urine. The wound bled freely, and gave the patient much relief. From this time he was able to pass water without the assistance of the catheter, partly through the wound, but principally through the natural passage. The wound suppurated kindly, and speedily healed.

It was necessary for some time to pass bougies, to counteract the effect of the contraction at the cicatrised portion of the urethra.

CASE II.—*Ruptured Urethra.*

WILLIAM BARNET, ætatis thirty-six, was admitted September 13th, 1827, into St. Bartholomew's Hospital. He stated that, on the previous evening, he had fallen about fifteen feet, and struck the perineum across an iron bar. Violent hemorrhage took place from the urethra, and the scrotum and integuments became distended with blood, accompanied with severe pain. He sent for a surgeon, who made many attempts to pass a catheter without success. He was bled, and leeches were applied to the part; but he passed a night of great misery, and the following day was admitted into the hospital. His bladder was at this time to be felt above the pubes; no urine had passed since the accident, (sixteen hours,) nor for some hours before. His countenance was anxious, and expressive of much suffering; pulse 100, and full; perineum and scrotum much distended, and of a dark livid colour: there was no external wound.

Mr. Earle cautiously introduced a full-sized silver catheter, which passed readily down into a cavity filled with coagulum between the rectum and membranous part of the urethra. The finger, introduced into the rectum, readily detected the point of the catheter in this situation. Mr. E. immediately made a free incision opposite to the bulb of the urethra, and extended it parallel to the rupture to the extent of two inches. A quantity of coagulum and fresh blood escaped, and the catheter became apparent, passing through the ruptured opening at the upper part of the bulb. Mr. Earle attempted to introduce an elastic gum catheter from this part into the bladder, but not readily succeeding, he desisted from any effort. The finger, introduced into the wound, passed into a large cavity filled with coagulum. It did not appear that any urine had been effused. He was placed in a warm hip-bath, which encouraged the bleeding from the wound, and loosened some of the coagulum. Whilst in the bath, some urine flowed through the wound. He now became very faint, and was removed to bed; and the bleeding was restrained by the application of lint and cold cloths. Urine mixed with blood continued to dribble away. He passed a tranquil night, without any return of bleeding.

On the 15th, he passed about half a pint of urine voluntarily through the wound, which relieved him much.

On the 17th, he experienced difficulty in passing his water through the wound, and the dresser endeavoured to remove a coagulum which presented itself. This was followed by a return of arterial bleeding, which continued to flow through the greater part of the night, until the patient was alarmingly faint, requiring the administration of brandy and ammonia, with opium.

On the 18th, no urine had passed, but the bladder was not distended. He continued very faint, with a feeble intermitting pulse. On raising him upon a night-chair, he was able to pass water through the wound. Suppuration now began to take place, and no farther alarming symptoms occurred.

October 2d.—A good-sized metallic bougie, No. 12, was introduced. On reaching the situation of the wound, it met with some resistance, which was readily overcome, and the instrument passed on without difficulty into the bladder. On withdrawing the bougie, the patient passed some water through the natural passage.

The bougie was introduced every second day. The wound in the perineum now rapidly healed, and was closed by the 8th of October.

Mr. Earle remarks, the preceding cases afford a good illustration of the best method of treating these serious accidents, which are sometimes followed by the most disastrous consequences from the effusion of urine, without the most prompt and decided treatment on the part of the surgeon. Where there is reason to apprehend that the urethra has given way, either by ulceration or from the application of force, the most judicious plan is to make a free opening in the perineum, by which we at once secure a ready exit for the urine, blood, and matter, and prevent any extension of the mischief. This is far better than to persevere in endeavouring to introduce instruments into the bladder, by which the injury is often much increased, while the attempts prove abortive; and, even should they succeed, it frequently happens that the presence of the foreign body in the urethra keeps up the irritation and increases the malady. In many of these cases, where there is no external wound, and where the patient is ignorant of the nature of the injury, and the danger to be apprehended, it is often difficult to persuade him or his friends of the necessity for such an operation. Much decision and firmness are required on the part of the surgeon, who should act at once, or he may be too late to prevent extensive or even fatal effusion of urine. No possible danger is to be apprehended from the performance of the operation, which places the patient in a state of security, and enables nature to set about her process of reparation. The wounds always heal readily, if properly treated, and the external incision be of sufficient extent.

CASE III.—*Retention of Urine.*

H. HOSKIN, æt. thirty-two, a sailor, admitted December 31st, 1827, into ST. THOMAS'S HOSPITAL, under Mr. GREEN, in robust health, caught, six weeks ago, a virulent gonorrhœa, for which he has taken a small quantity of medicine, which merely proved aperient. He continued his intemperance, and, about a fortnight before admission, the gonorrhœal discharge somewhat diminishing, the stream of urine was observed also to decrease, gradually becoming less, till yesterday morning, when the gonorrhœal discharge entirely ceased, and with it the power of voiding the urine, even in drops.

When admitted, (four o'clock P.M.) had passed no urine for forty hours; the attempts to do so very frequent and urgent; considerable swelling at lower part of abdomen; great tenderness and tension, with constant sense of "burning" in region of bladder; great thirst; hot and dry skin; anxious countenance; quick and hard pulse; constipation of bowels.

Immediately placed in a warm bath for one hour and a quarter, and forty-eight ounces of blood abstracted, which produced fainting, when a gentle attempt was made to pass the catheter; but, spasm being induced, and hæmaturia returning, it was not persevered in. On leaving the bath, about a quarter of a pint of urine was passed.

Ordered ℞. Ol. Ricini ℥ss.—Tinct. Opii Sedativ. m. xx. statim sum.

January 1st.—Somewhat better. Continued passing small quantities of urine till three o'clock this morning, when he fell asleep, and none has since passed. Less tenderness and tension of abdomen; bowels freely open; pulse more compressible.

Vespere.—Has passed no urine since morning: inflammatory symptoms increasing.

Warm bath and draught repeated.

The symptoms becoming more and more urgent, at one o'clock A.M. (January 2d,) Mr. Green was sent for, and at two proceeded to relieve him by operation.

Having placed the patient as for lateral operation of stone, Mr. G. introduced the male catheter down to a slight permanent stricture, which existed just where the urethra contracts at the bulb.

He then made an incision about an inch and a half along the raphé, not quite so high, however, as to reach the catheter, as that could not be effected without dividing part of the scrotum, which was unnecessary. Having found the urethra, he attempted to pass the catheter forward into the bladder, but, finding this impracticable, a female catheter was introduced through the opening, and a considerable quantity of urine drawn off. The male catheter was then carried by the side of the female catheter into the bladder, where it was permitted to remain. A rather large vessel was divided during the operation, and it was necessary (it being too deep-seated to secure by ligature,) to restrain the hemorrhage by pressure, which was continued one hour and a half.

In some remarks on the above case, Mr. Green observed that it presented a fair specimen of his treatment of spasmodic, combined with some degree of permanent stricture. 1st. The production of fainting and very gentle attempts to introduce the catheter. 2dly. If unsuccessful and inflammatory symptoms are present, (which he considers a good criterion as to the necessity for it,) at once proceed to the operation. 3dly. The operation itself. There are two conditions of parts for which he prefers operating in the perineum,—viz. when there is a severe permanent stricture, or extravasation. In this case, it will be observed, there was neither: the stricture was slight, and might have been relieved by bougies; but it being very probable a false passage had been formed before his admission, (and if so, bougies could not have been employed with security,) Mr. G. considered it as sufficient to direct his choice. He prefers making his incision along the raphé, from the comparative facility with which the urethra may be found, which at best, without the guidance of a staff, is accomplished with some difficulty.

PULSATING TUMORS.

Case I. (condensed from the *Medico-Chirurgical Review.*)

J. Nowlan, æt. twenty-two, was admitted into the Institution in Panton-square, with a pulsating swelling on the left parietal bone, in the situation of the posterior temporal artery. It could be emptied by pressure, but a large communicating branch passed across the vertex from the opposite temple, and contributed to supply it with blood. The cranium beneath appeared to be very considerably absorbed. The temporal artery had been secured (at least it was so supposed) by Mr. Babington, but with no effect. The day after the man's admission, the common carotid artery was tied by Mr. Wardrop, in order, as the reporter tells us, "to completely arrest from almost every channel, the supply of blood to this rapidly increasing vascular tumor." Much difficulty was experienced in getting the needle round the artery, and a free bleeding took place (so goes the report) from two large thyroideal veins. The pulsation ceased, but the tumor did not collapse, and next day a thrill was again perceptible. On the fifth day, there was much fever, and he was bled to syncope. On the seventh, hemorrhage, partly venous and partly arterial, occurred to a considerable extent, and he was again bled to fainting. On the ninth day, he was once more largely bled. Venous hemorrhage had occurred daily since the operation; the wound was not disposed to unite, and the tumor distinctly pulsated.

Eleventh day.—Pain in the left eyeball and orbit, with deafness, drowsiness, and mental disturbance, which increased on the 12th almost to coma, with contracted pupil.

On the thirteenth day, he was better, but the eyeball was found to be greatly protruded. The protrusion in the eyeball, however, continued to increase; the sclerotica sloughed, and the humors were discharged. The ligature came away on the twenty-fifth, and the wound quickly healed.

Nothing further was heard about the case until the 4th January, when the poor fellow was admitted into the MIDDLESEX HOSPITAL, with lumbar abscess, and altogether in a most miserable state. On the 21st he died. The tumor at this time was large, and pulsated very strongly.

On dissection, the posterior temporal artery was found to divide into two branches,—one running, as usual, beneath the skin; the other perforating the tendon of the occipito-frontalis, and then, considerably enlarged, twisting and turning and coiling upon itself, looking, when injected, as like a varicose vein as it is possible for a vessel which has no valves to resemble one which has them. On examining the neck, the common carotid was obliterated, and converted into a cellular cord just up to its bifurcation, whilst the jugular vein was in nearly the same state of degeneration from the site of the ligature up to the division of the carotids, from which to the base of the brain it was plugged with coagulum. There was much pus at the basis cranii, and around the commissura tractuum opticorum; it lay between the pia mater and arachnoid, and was continued within these membranes down the whole length of the spinal cord. The cranium was somewhat grooved beneath the tumor, just as it would be beneath a powerful muscle, but the pericranium was entire, and the inner surface of the bone was perfectly smooth and equal.

CASE II.—W. Maclure, æt. thirty, a discharged soldier, applied to Dr. MACLACHLAN, on the 9th of July, 1825. The following is the account of the symptoms:

"Having caused that side of the head to be shaved, the better to observe the nature of the tumor, it presented the following appearances:—Soft, puffy, pulsating, and somewhat elastic swellings, of a varicose appearance, were found to occupy the course of the temporal, posterior auris, and occipital arteries, and their principal branches, each branch terminating by a tortuous extremity. These swellings could be made partly to disappear on pressure, but on its removal they speedily regained their former violence. They pulsated throughout their whole extent, and the pulsations were synchronous with those of the heart. By pressing on the common carotid, the pulsations ceased all along the swellings; and, by intercepting the flow of blood through the temporal or posterior auris, the throb was interrupted in corresponding parts of the tumor. They were not painful on being handled, but he complained much of the torture he had experienced for the last two months, from the throbbing, which often deprived him of rest for nights together, and, as he said, made his existence miserable to him. The integuments covering the swellings were of their natural colour; only at those points which were most prominent they had a slightly bluish-red tinge.

"This arborescent tumor commenced in front of the ear, immediately over the zygoma, and quickly swelling out, it became of the size of a split lemon, lying transversely over the ear. It sent a process forwards on the forehead, communicating by a tortuous extremity with the supraorbitary twig from the internal carotid; a large process upwards to the crown of the head; and backwards, the main body of the tumor communicated with the puffy swellings of the posterior auris and occipitalis, which latter vessels gave a varicose feeling to the scalp over the left side of the occiput.

"The largest and most prominent part of the tumor was immediately over the ear: at this point the throbbing was very violent, and the integuments being very thin and rather pointing, it threatened ere long to burst.

"The history he gave of his disease was the following: about ten years previously he had the temporal artery opened for an attack of ophthalmia. A small aneurismal tumor formed at the point of incision, for the cure of which the artery was cut across, lower down; but this not succeeding, the vessel was again exposed and a ligature applied. The little tumor disappeared, he says, only for a time: on its return, it was but small, gave him no uneasiness, and, although he served as a soldier for five years afterwards, he never complained of it to his surgeon.

"This disease seemed to me different from any kind of aneurism by anastomosis that I had either seen or read of. It evidently followed the ramifications of particular arteries; for, by pressure being made on a particular vessel, a corresponding portion of the tumor became flaccid and pulseless, showing distinctly that no free intercourse by means of cells existed in it.

"I proposed the trial of pressure: he said it had already been employed, and that it gave him so much pain that he would not again submit to it. He urged me at once to proceed to tie the carotid artery, as he was informed that that was the only means by which the disease could be effectually cured. I then explained to him the possibility of taking up the vessels singly; and that, should we fail, it was then in our power to tie the common carotid. He agreed; and, with the assistance of Professor Towers and Dr. Anderson, I began by laying bare the temporal artery as it emerges from the parotid gland: but, on dividing the fascia-like substance which kept it in situ, it shot forth through the opening in the form of a loop, in calibre larger than a goose-quill, thinner in its coats, and, if possible, more diaphanous than a vein; and thrilling violently at each pulsation. A ligature was applied to this loop; the wound was brought together with adhesive plaster, and, for additional security, a firm compress and bandage were applied. It was now evident that the vessel was diseased at the point of ligature, and the propriety of tying the common carotid hence became obvious. Pulsation had, however, ceased in the anterior and central portions of the tumor, which felt flaccid and doughy, showing that this plan of treatment would, in all probability, have been successful, so far as the vessels of the scalp, at least, were concerned, could the state of the arteries have been trusted to.

" Next day the common carotid was tied, in the presence and with the concurrence of Professors Burns and Towers, Drs. King and Anderson. An incision, about two inches and a half in length, was made along the inner edge of the sterno-cleido-mastoid muscle, commencing at the lower edge of the thyroid cartilage, and extending downward to within half an inch of the sternal extremity of the clavicle. A large branch of the exterior jugular vein ran across the line of incision, but, by carefully cutting through the fascia-like platysma myoides, the vessel was easily drawn aside along with that muscle. The sterno-cleido-mastoideus was now seen forming the outer margin of the wound, and the omo-hyoideus crossing it superiorly. The dissection was cautiously carried deeper, until the descendens noni was seen over the sheath of the vessels. The artery and par vagum were now distinctly in view, but the internal jugular vein, which frequently gives much trouble during this operation, did not at all appear. The sheath was opened by cautiously scratching with the point of the scissors between the carotid and par vagum, which nerve was carefully drawn aside. A blunt aneurismal needle, armed with a very fine silk ligature, was now introduced, and passed with ease, from without inwards, under the vessel. The ligature being tied, the ends were cut short, and the artery left undivided. The wound was brought together with sticking plaster, and a light compress and bandage applied. He did not lose above a spoonful of blood, and his pulse, immediately after the operation, was seventy-eight, and of good strength. Immediately on tying the vessel, the varicose tumors of the head became devoid of pulsation and felt flaccid, although their prominence was but little diminished.

" In the evening he felt his neck rather stiff; had slight headache, seated principally under the right temple. Took some food with relish. Pulse eighty-four; skin rather hot.

He gradually sunk, and died on the 14th.'

"*Dissection*, fifty hours after death, in presence of Dr. Anderson and several medical gentlemen of Paisley, to which town the body had been removed. The weather being very hot, putrefaction had made considerable progress. The viscera of the abdomen appeared healthy. The intestines were much distended with flatus, devoid of fæces, and blanched.

"In the chest, some straw coloured puriform matter was found in the anterior mediastinum: about a pint of thick, greyish, muco-purulent matter in the right cavity of the pleura, and a small quantity of bloody extravasation into the left. The pericardium was unusually devoid of fluid; the heart large and flaccid.

"The wound, which had adhered throughout its whole extent by the first intention, had partially reopened from putrefaction. The carotid, the par vagum, and jugular vein appeared as if they never had been disturbed, nor was there the least appearance of pus around the ligature. On slitting up the artery, and cutting through the ligature at the same time, (the ligatured portion having been previously removed from the body,) small but soft clots were found above and below the ligature, and the artery remained puckered from the recent deposition of lymph. Its inner coats were divided as with a knife, while its external was found dense, strong, and entire. Below the ligature, the inner coat of the artery was of a vermilion red colour; even that of the thoracic aorta bore equal marks of inflammation, but at the bifurcation it was of its natural aspect; that portion also of the aortic arch nearer the heart than the coming-off of the left carotid was healthy. The carotid in the neck was of its usual size, strength, and thickness; but, on examining its branches on the head, they were found to have degenerated into dilated tubes of extreme thinness and transparency; which apparently yielding to the impetus of the blood, had become elongated, contorted, and ultimately convoluted on themselves, so as to form, by this species of doubling, the tumors which constituted this singular disease. These tumors felt like the placenta, and to the eye the larger portion immediately over the ear looked precisely like a bundle of earth-worms coiled together.

"I regret that, from the peculiar circumstances under which this inspection was obtained, I had not an opportunity of examining, more at leisure, this very unusual disease of the arterial system, or even of ascertaining the exact point at which the disorganization commenced; whether the artery became gradually thinner, or whether the disease began suddenly; whether in the diseased portions the three coats existed, or the dense but thin external one only remained; whether the branches of the internal carotid were similarly affected with the external, and thus giving rise to the epileptic fits to which he had recently become subject. These points unfortunately must be left to conjecture.

"I have been at some pains in searching through books for analogous cases, but PELLETAN is the only author, as far as I know, who has distinctly described this disease. In his Clinique Chirurgicale, tome ii. two cases are given, which coincide in every particular with the one here detailed. One of these only, a girl eighteen years of age, he had an opportunity of treating. Compression was first tried, but the patient could not bear it. He then tied the temporal artery: this promised to be successful, as far as the portion of the tumor supplied by that vessel was concerned, when unexpectedly the patient died in consequence of an 'indigestion.' He has fortunately favoured us with plates of this case, which are of great assistance in elucidating this subject, for he has said but little pathologically of the nature of the disease. He speaks merely of dilatation, but it is evident, from plate ii. fig. 2, in which the convolutions of the arteries of the scalp are given, on dissection, that the view above advanced, viz. the doubling of the dilated vessel on itself, as the cause of the tumor, is a correct one. BOYER,* also, who saw this case, and has given the dissection more at length, says, in speaking of the structure of the tumor,—"Toutes les artères comprises dans la tumeur, au dessous du tissu donc nous venons de parler, étaient dilatées, flexueuses, bosselées, ici très larges, là très étroites, pleines de sang caillé, ou d'une humeur blanche et épaisse. L'artère temporale depuis son origine, jusque vers le milieu de la tempe, avait éprouvé une simple dilatation.—Plus haut l'artère temporale, et ses diverses branches, étaient bosselées, flexueuses, grossés, et rouges." His remarks on the occipital branches are to the same effect.

"Mr. JOHN BELL describes aneurism by anastomosis, to which the disease under consideration has most affinity, to be 'a congeries of active arteries, absorbing veins, and intermediate cells.' Now, in the tumor which I have attempted to describe, there were no cells, no parenchyma, as in the spleen; the bulk of the tumor was formed almost entirely by convoluted dilated arterial *trunks*, the veins being but little changed from their healthy state. These arteries did not appear to communicate more freely than by their ordinary inosculations; and, in the less prominent parts of the swelling, they had more of the appearance of the contorted vessels of the gravid uterus, as represented in TIEDEMANN's beautiful plate, than any other anatomical comparison I can give. Mr. ABERNETHY* evidently alludes to this disease when he says, while speaking of nævus, 'For this preternatural enlargement of vessels is not always cutaneous. I have seen it occupying the whole substance of the cheek, neither appearing beneath the skin nor the membrane of the mouth. I have seen it in the orbit,' &c. The cases reported by Messrs. TRAVERS and DALRYMPLE, in the London Medico-Chirurgical Transactions, vol. ii. and vi., in which the carotid artery was tied for pulsating tumors of the orbit, appear to have been of this description.

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* Traité des Mal. Chir. tome ii. p. 295.

"I have made these remarks and extracts because I conceive there exists a pulsating tumor composed entirely of dilated and convoluted arteries, whose inosculations and interlacements are not more numerous than usual, only they become more apparent from their increased size. That this tumor may occupy a great extent of surface, such as the side of the head, the neck, or arm, from its following in a continuous manner the course of the arteries. That the term aneurism by anastomosis is not very applicable to it; and that, from the advanced age of many of the persons in whom this disease has been met with, its congenital nature is more than doubtful, although BOYER, PELLETAN, and others, are of this opinion. Whether, in the case of Maclure, the vessels were perfectly sound at the period of opening the temporal artery, may admit a doubt. The difficulty of curing the small aneurismal tumor favours this doubt: yet there certainly existed no obvious trace of enlargement of these vessels to lead to this conclusion. In explanation of this remark, it may be necessary to state that the artery was opened by myself. The opening of the temporal artery, however, probably operated as an exciting cause on vessels already disposed to disease."

The above case is taken from the *Glasgow Medical Journal*, conducted by Mr. MACKENZIE, with whose valuable papers on the Eye the readers of this Journal must be familiar.

ANEURISM.

Femoral and Popliteal Aneurism. External Iliac Artery tied.

WILLIAM SMITH, aged forty-two, admitted into the NOTTINGHAM GENERAL HOSPITAL, August 24th, 1824, under the care of Mr. W. WRIGHT, with an aneurism of the femoral artery, at the upper part of the thigh, and another in the ham, both in the left extremity. He gives the following history of them:—About a year ago, after having taken a walk of some miles, he felt himself much fatigued, having been in a bad state of health for some time previously, but imagined that rest would soon restore him: in two or three days after this he felt some pain in the thigh, and afterwards a small lump arose, on applying his hand to which he perceived a violent pulsation. In a short time the other tumor made its appearance in the ham, being attended with the same beating feel as the first. He says both the tumors had been gradually increasing, attended with occasional pain, till about six weeks ago, when the one in the thigh became very painful, and began to increase more rapidly, at the same time the one in the ham began gradually to decrease: from this time he could never distinguish any pulsation in either tumor.

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* Surgical Works, vol. ii. p. 225.

His health appears greatly impaired; he is much emaciated, and cannot rest on account of the pain in the thigh. The aneurism has now obtained a great size, extending from about two inches below Poupart's ligament to nearly half way down the thigh: in its greatest circumference it measures twenty-one and a half inches, while that of the opposite thigh is only thirteen inches. The tumor is extremely hard, and the integuments covering it very tense, and marked with several dark purple spots: no pulsation can be felt in any part of it, but, with the assistance of the stethoscope, a sound, like water forced through a contracted channel, may be heard synchronous with the pulse at the wrist; the pulsation of the artery above the tumor is distinct, but weak. The tumor in the leg is about the size of a goose's egg: no pulsation or sound can be discovered in it by the stethoscope; it is free from pain.

Cold applications directed to be constantly used.

After this time he appeared gradually to improve: his health became better, the pain in a great measure subsided, and the sound heard by the stethoscope entirely disappeared. He took occasional doses of castor-oil, and an opiate at night when restless. The tumor evidently diminished in size, the integuments less tense, and the tumor in the ham became not more than half the size it was. In this state he remained till the 17th of August, when, attempting to raise himself up in bed, all the former symptoms returned with increased violence: the tumor became larger and more painful than ever; the sound of the pulsation was again heard, but in a few hours afterwards it disappeared, and the integuments became much more discoloured. The state of the patient becoming worse, a consultation was held on the 19th, when it was determined that the external iliac artery should be tied.

On the 22d, at twelve o'clock, Mr. Wright proceeded to operate according to Mr. C. Bell's method, by making an incision about four inches long, and nearly in a direction from the internal abdominal ring to the superior anterior spinous process of the lium: three arteries were divided and tied, two being small and superficial, the other nearly in the situation of the epigastric.

The peritoneum being now separated and held back, the external iliac was distinctly seen pulsating, and two large veins running obliquely over it; one of which was ruptured while separating the artery from its attachments. The sheath of the vessel was now opened, and one strong silk ligament passed round the artery and ruptured vein, and both were tied together. The lips of the wound were brought together by one suture in the centre and adhesive plaster. The patient was then carried to bed, and the thigh well supported by pillows under the knee.

He took twenty-four drops of the Black Drop (equal to about 100 of the Tinct. Opii); and was directed to keep quiet, and have the legs covered with flannel.

He gradually recovered; and was made an out-patient on the 18th of January.

April 12th, the following is the report:—The tumor has considerably diminished; he can walk about, but is very weak, and complains of pain in the stomach and of general dyspeptic symptoms. The wound is completely cicatrised, but there is a little descent of intestine through the opening made in the tendon of the external oblique: he attributes the descent of it to a severe cough which he has had some time. Is advised to come into the hospital, on account of his general health.

From this time to the 15th of April, he remained nearly in the same state, complaining of dyspnœa and palpitation, with cough and expectoration. He became gradually more emaciated, and died suddenly on the morning of the 15th. The body was examined the following day.

The tumors in the thigh and ham were diminished in size, and were of a firm and elastic feel; the tumor in the thigh was covered with a firm compact fascia, which was, however, but little adherent to the tumor; the posterior part of the tumor was firmly attached to the bone and neighbouring muscles by strong ligamentous substance; the external iliac was pervious from its origin to the ligature, which had completely obliterated the canal; the knot and loop of the ligature were found by the side of the artery enveloped in a little cyst resembling an inguinal gland; below the ligature, the artery was pervious to its entrance into the tumor. The tumor contained some dark-coloured, rather fluid stuff, resembling coffee-grounds; the parietes of the tumor were firm, hard, and ligamentous, and lined with layers of coagulated lymph, of the same colour as the semifluid contents; the tumor was almost filled up at the posterior part. About the entrance and exit of the artery, it was firm and cartilaginous: the artery presented nothing remarkable between the tumor in the thigh and that in the ham, which was about the size of a pullet's egg, and contained the same kind of matter as the other; its parietes were much thinner; the division of the artery below the ham was as usual. On examining the chest, the left side was found filled with coagulated blood, which had escaped from a small opening in the walls of a

large aneurism of the arch of the aorta; the left lung was condensed, and the larger bronchia filled with pus; the right lung was perfectly healthy.

The above account is condensed from that published in the last Number of the *Medical Repository*.

Case of Inguinal Aneurism, in which the external Iliac Artery was tied.

Patrick Connell, æt. thirty-eight, a tailor, was admitted into St. George's Hospital, February 15th, 1828, under the care of Mr. Brodie. He stated that, in the month of October last, he was much exposed to cold and damp in Whitecross Prison, and at that time was affected with "rheumatic pains," particularly in the left leg. About the middle of November, whilst making some exertion, he felt something "give way" in the left groin, and soon afterwards noticed a small pulsating tumor there. It increased gradually in size for the first fortnight, and then remained stationary, or nearly so, until the beginning of the present month, when it became much more swollen and painful, and the limb generally œdematous. He applied eight leeches to the groin, with some relief, and took a purge or two; but has done nothing further for the complaint, and has followed his ordinary occupation until very lately.

Such was the history of the disease given by the patient; and the following were the symptoms upon his admission:—In the left groin was a hard pulsating tumor, nearly filling up the triangular space between the sartorius and pectinæus muscles. The margins of the tumor was tolerably well defined; its form was triangular, and its surface irregular, being more prominent above and below than in the centre. It appeared to be somewhat abruptly bounded by Poupart's ligament above; and extended downwards for better than two inches, probably to the point where the profunda femoris is given off. It was reducible in a great measure by pressure; the pulsation was distinct, and apparently very near the surface, showing that no great quantity of coagulum had been deposited. Pressure upon the external iliac artery completely arrested the pulsation of the tumor, but did not materially diminish its size; whilst pressure on the femoral below only lessened the pulsation. The whole limb was greatly swollen and rather tense, while the foot was œdematous and numb. There was much stiffness, with tingling, and pain shooting from the groin round to the outer side of the thigh, and down to the outside of the knee. His health had always been good; but he looked sallow and anxious, had been suffering many privations and a great deal of mental distress. The appetite was indifferent; he did not sleep well; the bowels were costive, tongue red, and the pulse had the aneurismal jerk.

Under these circumstances, he was bled once or twice, and purged; and on the 21st, the pulse being quieter, and the patient anxious for the operation, the external iliac artery was tied by Mr. Brodie.

The method of operating was that which has been recommended by Mr. ABERNETHY: the incision, however, being somewhat semilunar, and placed rather more on the iliac side of the vessel than in that gentleman's operations. The oblique and transversalis muscles were carefully cut through, the peritoneum cautiously raised from the belly of the iliac and psoas muscles, and the artery discovered pulsating on the inner side of the latter. Care was required in passing the needle round the vessel, in consequence of its having contracted some adhesions to the vein, &c.; but this being done, and the ligature, which was a single one, drawn tight, all pulsation ceased immediately in the tumor, though it did not diminish much in size. The lips of the wound were brought together by three sutures and adhesive straps; one end of the ligature brought out at the wound, the other having been cut short; and the patient removed to bed. The operation was performed with great facility, and the patient bore it remarkably well; whilst the pain in the thigh, &c. almost instantaneously ceased. In the evening the limb was colder than the other; he had been sick, and was restless. Pulse a little harder than in the morning. A flannel roller had been applied.

22d.—Has passed a better night, but his appearance is far from being satisfactory this morning: his breathing is oppressed; he speaks in an under tone, as if fearful of calling into action the respiratory muscles; and there is that playing of the nostrils described by Mr. CHARLES BELL as marking an insidious affection of the chest. There is pain in the right side and loins on taking in a full breath, as well as in attempting to cough, which he is afraid to do; thirst; tongue coated; pulse ninety, corded, and full. Mr. Brodie, on seeing the patient at one P.M., immediately directed a vein to be opened, and, after eighteen ounces of blood had been abstracted, the pain in the side was relieved, and the countenance clearer.

H. Sennæ, sextis horis.

Vespere.—The bleeding has had a most decided effect, the pain being much relieved, and the hardness of the pulse diminished. He has been asleep during a great part of the day, and feels much better this evening. The bowels have not yet been opened. The blood drawn is buffed.

Repet^r Haust. Sennæ.

From this time he went on favorably.

In a clinical lecture delivered upon this case, immediately after the performance of the operation, Mr. BRODIE observed, that he had preferred Mr. ABERNETHY's operation in this instance, because he was induced to believe that the disease had extended up beneath Poupart's ligament, requiring the ligature to be applied from the upper portion of the external iliac. In Sir **Astley Cooper**'s method, the ligature is necessarily applied rather low, and there is likewise a danger of wounding the epigastric artery, which was done in 1821 by M. **Dupuytren**. For these, and other reasons which we need not particularise here, Mr. B. was induced to prefer, in this instance, Mr. Abernethy's operation, which he had twice previously performed with success. He had made the incision somewhat semilunar, partly because such a form of incision affords facilities to the operator, and partly because the iliac vessels assume a certain curve as they wind round the cup of the ilium.

CRITICAL ANALYSES.

> Quæ laudanda forent, et quæ culpanda, vicissim
> Illa, prius, cretâ; mox hæc, carbone, *notamus*.—Persius.

Pathological and Practical Researches on Diseases of the Brain and the Spinal Cord. By John Abercrombie, M.D. Fellow of the Royal College of Physicians of Edinburgh, &c.—8vo. pp. 444. Waugh and Innes, Edinburgh, 1828.

(Concluded from p. 247.)

Under the head of ***Inflammation of the Central Parts of the Brain***—the corpus callosum, septum lucidum, fornix, and the membrane lining the ventricles,—we meet with numerous cases illustrating the symptoms and pathology of the various forms of *acute hydrocephalus*. In common with the ablest pathologists of the present day, the author considers this disease as essentially inflammatory, the effusion being merely the result of the previous action, and not always present in cases which pass through all the usual symptoms of hydrocephalus. As there can now be little doubt that the leading principle to be entertained, in reference both to the pathology and treatment of this complaint, is its inflammatory nature, we think that the term hydrocephalus might be advantageously discarded from medical language, and one more appropriate adopted. In a medical point of view, it is manifestly unscientific, and its influence on practice more than doubtful. Moreover, we are sure that, were the term dropped entirely by medical men in common parlance, they would often be spared some mortification, and perhaps loss of reputation, by not treating a disease under the name of *water in the brain*, when, on inspection after death, not a drop of water can be found.

According to our author, the disease presents itself under two different forms In the one, the inflammation appears to be seated in the membrane lining the ventricles; in the other, in the white matter forming the corpus callosum, septum lucidum, and fornix. In the former case, we have effusion into the ventricles, often with deposition of floculent matter on their inner surface, or surrounding the choroid plexus; or ramollissement of the adjoining cerebral substance. In the latter case, the affection presents itself in the ramollissement or white pulpy degeneration of the parts affected, the septum lucidum being perforated by an irregular ragged opening, owing to the softened portion having fallen out, and the fornix having lost its consistence and figure, or so much of its cohesion as to fall asunder at the slightest attempt to disturb it. Here the author reiterates his opinion that this peculiar degeneration is a product of inflammation, and refers to the facts presented by the cases detailed in the sequel. These distinctly show not only its frequent concurrence with effusion into the ventricles, but also its existence as the sole morbid appearance in decidedly marked cases of the disease. Some of the cases supply another satisfactory evidence of the inflammatory origin of this phenomenon, in the transition of the inflammatory state into that of ramollissement, distinctly visible in the same mass. This termination is, in our author's opinion, the result most to be dreaded; for, in regard to the mere effusion, were the parts otherwise healthy, he does not see any reason for considering it a hopeless affection, admitting the possibility of serous fluids being absorbed from the ventricles; a supposition which he thinks is warranted both by the analogy of other serous cavities, and by what we actually see take place in the brain itself. That absorption does take place in the brain, whatever the particular apparatus may be by which the function is carried on, he thinks is satisfactorily proved by the gradual disappearance of coagula from its substance and cavities. Unfortunately, however, the establishment of this fact would add little to our prospect of curing the disease, since effusion, uncombined with consequences more destructive and irremediable, is extremely rare; two cases only having occurred to our author in which he found serous effusion in the ventricles, without any other morbid alteration.

With all practical writers on the subject, we find the author alluding to the very proteo-form character of the disease, and the extreme difficulty of connecting the phenomena with the particular morbid condition of the parts affected.

"It is unnecessary to multiply cases which present no particular variety in the phenomena; those which have been described will probably seem sufficient to illustrate the principal forms of this affection, and at the same time to exemplify some of the most remarkable varieties in the symptoms. From a fair and candid review of the whole subject, I think we can have little hesitation in concluding, that this is the ordinary form of the disease, which is commonly called acute hydrocephalus; that it is originally an inflammatory affection, chiefly seated in the substance of the central parts of the brain; that it generally terminates by ramollissement of these parts, combined with serous effusion in the ventricles; and that it may be fatal by the ramollissement alone, even of small extent, but with all the symptoms which are commonly considered as characteristic of acute hydrocephalus. The cases likewise exemplify various important varieties in the symptoms. We have seen in some of them perfect coma of long continuance, without any effusion; and, in others, extensive effusion without any degree of coma. We have seen, again, the coma entirely removed, and yet the disease go on to its fatal termination. We have seen every variety in the state of the pulse, of the vision, and of the intellectual functions; and we have seen the disease run its course without any complaint of pain, or any symptom indicative of danger, until the patient was unexpectedly found in a state of profound coma. These, and many other varieties, presented by the cases which have been described, show us the danger of being guided by system in our diagnosis of affections of the brain, and the necessity that there still is for extensive and careful observation of facts in regard to this class of diseases." (P. 142.)

This acknowledgment is, we confess, humiliating, but it is honest, and far less likely to retard the attainment of truth than is the assumption of a certainty in diagnosis, to which our present stock of experience proves that we have no title.

The important position demonstrated by the cases detailed under this head, is the inflammatory nature of hydrocephalus; and the obvious conclusion to which they lead, is that our practice should be directed principally to subduing the inflammation at its earliest period, and preventing it from passing into effusion and the other results, particularly ramollissement, which we have seen to be a fatal termination, though of small extent, and without effusion.

A short section, which concludes the first part of the work, is allotted to the *treatment* indicated in this, as well as in the other forms of inflammatory affections of the brain. The remedies, according to our author, are few and simple, and their success will in a great measure depend on their being employed at an early period, and in the most decided manner. Those on which we must chiefly rely are blood-letting, general and topical, active purgatives, and cold applications to the head. We have too often to regret the inefficiency of these measures, even when judiciously employed; but we are not without a sufficient proportion of recoveries under the most unpromising circumstances, and the cases which thus terminate favourably hold out every encouragement to proceed with vigour in the treatment of a class of diseases, which, after a certain period of their progress, we are too apt to consider as hopeless. Next to the timely employment of the remedies, the ground of prognosis in particular cases will depend on the activity of the symptoms: the more these approach to the character of active inflammation, our prospect of cutting them short will be the greater; the more they partake of the low scrofulous inflammation, it will be the less.

Among the cases selected by the author to illustrate the treatment, we find examples of the disease under the most unpromising circumstances, some showing it arrested in the early or acute stage, and others at a more advanced period, after the supervention of coma and other symptoms which are usually considered as irremediable. In many cases general bleeding is employed, sometimes with immediate and permanent effect; in others a repetition of it is necessary to insure success. Active purging appears to be applicable to all cases, and, according to our author's experience, more recoveries from these head affections take place under strong purgation, than under any other mode of treatment. The effect of blistering in the early stages is rather doubtful: they ought at no period to be employed so as to interfere with a more decidedly useful topical remedy, the application of cold to the head. In acute cases, the most effectual mode of applying it is by a stream of cold water directed against the crown of the head, and continued until the effect is obtained. Applied in this way, it is an agent of such power that it requires to be used with much discretion. Under the operation of it, our author has seen a strong man thrown, in a very few minutes, into a state approaching to asphyxia, who immediately before had been in the highest state of maniacal excitement, with a morbid increase of strength defeating every attempt of four or five men to restrain him. Another case is given, showing the immediate effect of the remedy in a different modification of disease. A strong plethoric child, after one day of fever, restlessness, and oppression, fell rather suddenly into a state of perfect coma. When seen by our author, she was lying on her back, quite insensible, and with her face flushed and turgid. She was raised into the sitting posture, and a stream of cold water directed against the crown of the head, when, in a few minutes, or rather seconds, she was completely recovered, and next day was in her usual health. The same remedy he is in the habit of using, with the best effect, in the convulsive attacks of children, in preference to the warm bath; the indiscriminate employment of which he considers as being highly injurious.

The efficacy of mercury in hydrocephalus our author deems extremely questionable, and its employment during the first or more active stages decidedly injurious. We are inclined to dissent from this low estimate, or rather this sweeping condemnation, of an agent of such acknowledged power in arresting inflammatory action and its effects in other textures, membranous as well as parenchymatous. Many recoveries from head affections take place under its use, which we are warranted, by the analogy presented in croup, iritis, and hepatitis, to ascribe to its controlling influence.

Tubercular Disease of the Brain.—Our notice of the cases described under this section must be brief, and we can do no more than refer the reader to those relating to certain affections of the bones of the cranium and affections of the pericranium; all of which are extremely interesting.

Tubercles of the brain, where we have an opportunity of observing them in their early stage, from the patient having died of some other disease, present the same characters as in other parts of the body; and are, in fact, very often combined with tubercular diseases in other organs. The symptoms attending their early existence are often exceedingly obscure and variable; perhaps little more than a tendency to headache, which sometimes assumes the appearance of periodical, or what is called sick headache. The symptoms may go on for a long time in this state, until, either unexpectedly, or from some exciting cause, the affection takes on a more active character, and is speedily fatal, with symptoms of oppression; and exhibiting, on dissection, along with tubercular masses, the most complete evidence of general inflammation of the cerebral substance. These cases are generally very protracted: in some the symptoms are severe, particularly the headache, which is often excruciating and remarkable for its intermissions and the regularity of its periodical recurrence, the intervals varying from a day to a week or a longer term. The fatal termination is sometimes sudden and unexpected, while, on dissection, extensive disease is discovered. A most remarkable instance of this kind is given, in which the extent of destruction of brain, from suppuration and pulpy degeneration, could scarcely be supposed compatible with mere existence, although the patient spent the evening preceding her death cheerfully with a party at the house of a friend. The subject of this case had laboured for many years under symptoms denoting serious affection of the brain.

Of the Apoplectic Affections.

In the investigation of apoplectic affections, we encounter the same difficulties which have hitherto rendered the pathology of inflammatory diseases of the brain so imperfect and unsatisfactory; viz. the want of uniformity in the appearances presented on dissection, and the absence of that correspondence between the symptoms and morbid actions so desirable with a view to judicious treatment in all diseases. A person previously in perfect health falls down suddenly, deprived of sense and motion, and dies after lying for some time in a state of coma. We find, on examination, a large coagulum of blood on the surface of the brain, or filling its ventricles, and the phenomena of the disease appear to be distinctly accounted for. Another person is cut off with the same symptoms, and we expect to find the same appearances; but nothing is met with except serous effusion, and that in small quantity. A third is seized in the same manner, and dies after lying for a certain time in a state of coma, from which nothing can rouse him for an instant, and, on the most careful examination, we cannot detect in the brain the smallest deviation from the healthy structure. Various speculations have, from time to time, been broached, to account for those cases in which no morbid lesion could be discovered on dissection, most of which are now deservedly forgotten, and that at present most generally entertained, viz. a temporary derangement of the circulating system of the brain, is beset with so many difficulties, that the author presents his own views on the subject, as "conjectures," in a separate section, not wishing to incorporate speculations, in a great measure hypothetical, with that part of the inquiry which embraces the history of the disease under its various aspects, the different morbid appearances disclosed by dissection, and the treatment.

The cases of apoplexy and paralysis detailed in the work amount to upwards of forty, and are arranged under three heads: 1, those which are immediately and primarily apoplectic; those which begin with a sudden attack of headache, and pass gradually into apoplexy; 3, those which are distinguished by palsy and loss of speech, without coma. These three forms frequently pass into one another, but occur so often distinct as to warrant the arrangement thus proposed.

I. The first class includes those cases of sudden attack of apoplexy, in which the patient falls down as in a profound sleep, deprived of sense and motion, with slow pulse, stertorous breathing, and, generally, flushed face. From this state the patient may speedily and perfectly recover; or he may die after the lapse of a shorter or longer period. On dissection, we sometimes, though rarely, find extravasation of blood; more generally serous effusion, though not in great quantity; but in many cases no morbid appearance whatever can be detected to account, satisfactorily, either for the attack or the fatal event.

Three or four cases are given from the author's experience, and several on record referred to, in illustration of that modification of apoplexy which is fatal without leaving any morbid appearance that can be discovered in the brain.

Under this head are also detailed those cases in which effusion of serum is the only or prominent appearance found after death, constituting what has usually been termed *serous apoplexy*, but which effusion the author is unwilling to regard as the cause of the apoplectic symptoms, but rather a result of some previous derangement of the circulation in the brain, to which also he thinks the cases first described ought to be referred. Dr. Abercrombie is also of opinion, with some authors, that the received division of apoplexy into *sanguineous* and *serous* is unsupported by observation, and conducive to bad practice; and certainly, whether we admit, or not, effusion to be a primary and sole cause of apoplexy, the cases described by the author, as well as by other writers, show that there is no ground for the distinction that has been drawn between the two forms; for the characters assigned to serous apoplexy are often found as the prevailing features of cases purely sanguineous, such as the advanced age of the patient, paleness of the countenance, and a feeble state of the circulation; while, on the other hand, many of the cases which terminate in serous effusion exhibit, in their early stages, all the symptoms usually assigned to sanguineous apoplexy.

II. The cases referred to the second class are not primarily apoplectic, or if, as in the first class, the patient falls down suddenly deprived of sense and motion, he speedily (in a few minutes or seconds, perhaps,) recovers, and is able to walk about. The prominent symptoms at the commencement are uneasiness or violent pain in the head, paleness of the face, weak pulse, generally sickness, and sometimes vomiting. The patient continues in this state for some time, oppressed but sensible, when, after the lapse of a few hours, the heat and the natural colour of the face return, and the pulse improves in strength; but the oppression gradually increases, the speech becomes slow and embarrassed, and at last fatal coma is established. The time from the first attack to the establishment of coma, or the complete apoplectic condition, varies, in different cases, from a few hours to two or three days; there being always, however, a certain interval of sense, generally with violent complaint of pain, which distinguishes these cases from what may be strictly called the apoplectic attack, which is characterised by immediate and complete loss of sensibility. Cases of this class generally terminate fatally, and, according to our author, there is less ambiguity in the morbid lesions than in the cases of simple apoplexy; extravasation of blood, to some extent, being generally found on dissection. These cases may therefore, he thinks, be safely attributed to the immediate rupture of a blood-vessel, without any previous derangement of the circulation; the rupture probably arising from preexisting disease of the artery at the place which gives way. It is supposed that, at the moment of the rupture, a temporary derangement of the cerebral functions takes place, which is soon, in a great measure, recovered from, but, the circulation going on, blood is at length extravasated in sufficient quantity to induce coma; the progress to coma depending, probably, on the size of the ruptured vessel and the remedial measures employed. We present the two following cases as examples of this modification of apoplexy. In the one, the coma supervened rapidly on the first attack; in the other, there was an interval of three days between the attack and the occurrence of coma; in both it will be remarked that the early symptoms were such as have been supposed to characterise serous apoplexy.

"A clergyman, aged fifty-five, while delivering his sermon during the morning service of Sunday, 13th May, 1827, was observed to stop and put his hand to his head; he then attempted to go on, but talked indistinctly, and had evidently lost his recollection; he supported himself by grasping the side of the pulpit. Assistance being immediately given him, he was taken out, and at this time was speechless and paralytic of the right side, but appeared to be sensible. He became rapidly more and more oppressed, and, in about twenty minutes from the commencement of the attack, had become entirely comatose. From the time when he was taken down from the pulpit, he was pale and cold, and his pulse extremely feeble; and this state continued when I saw him, about an hour after the attack; so that, though a vein was opened, very little blood could be obtained. Gradually the circulation rallied, and in another hour a full bleeding was obtained, without relief. All the other usual remedies were employed without benefit. From the time when the coma took place, there never was the slightest abatement of it; he lay with his eyes shut, his countenance pale and sallow, but placid and without distortion; his pulse weak, the power of swallowing lost, the breathing at first stertorous, afterwards slow and oppressed. He lived in this state till Monday at mid-day, about twenty-four hours after the attack.

"*Inspection.*—There was extensive extravasation of blood in the left ventricle, which had passed partly into the right by laceration of the septum. It seemed to have made its way into the ventricle from the substance of the brain, on the outer and anterior part, where there was a large irregular lacerated cavity, full of coagulated blood, and communicating with the ventricle. All the arteries of the brain were extensively ossified." (P. 224.)

"A gentleman, aged eighteen, previously in good health, after using rather violent exercise in the forenoon, had returned home before dinner, and was sitting near the fire, when, without any warning, he started up, pushed his chair backwards with violence, exclaimed, 'Oh my head!' and instantly fell on the floor insensible, and slightly convulsed. I saw him within ten or fifteen minutes after the attack. By that time he had recovered his recollection, was sitting on a chair, and was quite distinct. His face was extremely pale, and his whole body cold and shivering; he complained of severe headache, and his pulse was weak and rather frequent. Bloodletting was immediately employed, and his pulse improved under it. It was repeated after a few hours, with the addition of purgatives and the other usual remedies. The coldness and paleness went off after some time, and he then complained only of severe headache, with a feeling of stiffness of his neck, and pain extending downwards along the cervical vertebræ; his pulse was rather frequent and of good strength. He continued in this state for two days, the headache varying very much in degree, and frequently complained, chiefly of his neck; his pulse was frequent, 120 or more, and of good strength; the other functions were natural; he was quite distinct; had the use of all his limbs, and could get out of bed with little assistance, and sit up a considerable time. On the third day he began to be more oppressed, and a little confused and forgetful; the other symptoms as before. On the fourth he sunk very gradually into coma, and died on the 5th. His pulse had continued from 120 to 140; there had been no paralytic symptom; but on the fifth day there was repeated convulsion. Bloodletting, and all the other usual remedies, had been employed without benefit.

"*Inspection.*—All the ventricles of the brain were completely filled with coagulated blood. In the substance of the left hemisphere there was a cavity formed by laceration of the cerebral substance, filled also by the coagulum, and communicating with the ventricle. There was no other morbid appearance." (P. 229.)

There is reason to believe that, after the rupture has taken place, the hemorrhage may be arrested by the formation of coagulum, and, after some time, burst out afresh, and prove fatal. In such cases, the two extravasations can sometimes, on inspection, be distinguished from each other by their appearance.

The seat of the extravasation varies in different cases. The most common situation in which we meet with it is the substance of the hemispheres; in some cases it is confined to the ventricles only; and in others it is extensively spread over the surface of the brain, between the dura mater and arachnoid.

The most common source of the hemorrhage appears to be the rupture of a vessel of moderate size in the substance of the brain, from which the blood bursts its way by laceration either into the ventricles or to the surface, though in general it is not possible to trace the hemorrhage to its very origin. Disease of the vessels is supposed to precede and lead to this rupture, and very generally such previous disease will be found, on dissection, to exist: as ossification of the arteries in various places, or the peculiar earthy brittleness which SCARPA describes as leading to aneurism. In some cases, again, the inner coat of the arteries is much thickened, of a soft pulpy consistence, and easily separated. Ossification in the course of the arteries of the brain is by no means uncommon in old people, but the same condition may occur even before the middle term of life, and a case is given which shows that extensive ossification of the arterial system of the brain, with thickening and partial separation of the inner coat of the vessels, may exist for several years before it leads to extravasation and fatal apoplexy, though the patient, as might have been expected, laboured under considerable derangement of the cerebral functions. The hemorrhage sometimes takes place from the superficial vessels, constituting the *meningeal apoplexy* of SERRES, or from the vessels of the choroid plexus, in which case the coagulum will be found in the ventricles. The extravasation has also been traced to ulceration and rupture of one of the principal arterial trunks, as the bacelar artery; to rupture of one of the sinuses; and to the bursting of small aneurisms of the cerebral vessels.

III. The third class of apoplectic affections which become the subject of our author's researches, comprehend the *Paralytic Cases*. The leading features of this class are hemiplegia and loss of speech, without coma. Some of those cases, indeed, which begin as a paralytic attack, pass, after some time, into apoplexy, and properly belong to the second class. The cases described in the present section are, on the contrary, primarily and in their after progress, paralytic. The attack, under proper treatment, may, like simple apoplexy, pass off speedily and entirely, or, like it, may prove fatal, and, on dissection, present no satisfactory appearance, or only serous effusion, often in small quantity. In some cases the recovery is gradual, the use of the limbs being restored after several weeks or months. In other cases, again, the palsy may be permanent, the patient being not altogether helpless, but living for many years with imperfect use of his speech and limbs; or, lastly, the patient makes no recovery at all, but remains confined to bed, and reduced to that grievous state of existence which can hardly be deemed a boon.

The morbid conditions of the brain connected with these varieties are considerably diversified. Some bear a close analogy to what the author styles *simple apoplexy*, in which a formidable attack takes place, and either speedily and entirely passes off, or proves fatal without leaving any traces, on dissection, of serious injury of the brain. Many cases can, after death, be distinctly traced to extravasation of blood of small extent, contained in defined cysts in the substance of the brain or under the membranes. Other cases, again, depend on ramollissement of the cerebral substances, or supervene on inflammation and its consequences.

We are presented, in the course of the inquiry, with a number of cases occurring in connexion with these several morbid conditions of the brain, but the uniformity of symptoms is not such as can enable us, in all cases, to discriminate them, during life, from each other.

Extravasation of blood appears to be a common cause of paralysis, and it will naturally be inquired why extravasation should in one case produce perfect apoplexy, and in another palsy. According to our author, it would appear that the difference of result, in this respect, depended on the extent of the extravasation: extravasation of a limited extent, so as to be confined to a cavity of moderate size, inducing palsy; but, when the cavity is greater, to the loss of sense and motion we have coma superadded, constituting the apoplectic state. Attempts, indeed, have been made to establish a connexion between the functions impaired or suspended and the particular portions of the brain which are affected. Serres, in particular, has endeavoured to trace this connexion, but subsequent authors have adduced cases to show that the concurrence of morbid lesions of certain parts with particular symptoms is by no means uniform or general. This appears to be the opinion of the author. The subject is, however, one of much interest, and deserving of farther prosecution, in reference both to our diagnosis of apoplectic affections and to certain parts of the doctrine of phrenology, which doctrine will probably stand or fall through the labours of pathologists.

The danger or irremediableness of the case does not appear to depend so much on the amount of the extravasation as on the condition of the surrounding cerebral substance. When extravasation of small extent proves fatal, it is in general connected with ramollissement of a portion of the cerebral substance around the cavity which contains the coagulum. On the other hand, when the cerebral substance surrounding the extravasation is in a healthy state, we find that coagula of a very great size are gradually and completely absorbed. The author gives several interesting cases illustrative of this curious fact. The absorption appears to commence at a very early period, but to advance very slowly. So early as thirteen or fourteen days from the attack, a change from the appearance of recent blood has been observed to take place, the coagulum being firm in its texture and of a dark brownish colour. In its farther progress, the coagulum assumes a fibrous texture, and the last portion that remains is a small mass of fibrine, of a slight reddish colour, which, after a certain time, also entirely disappears, leaving an empty cavity. When these changes are going on in the coagulum, the cavity in which it is contained becomes lined with a firm membrane; and, when the absorption is completed, we find this membrane forming a distinctly organised cyst, with numerous blood-vessels ramifying upon it. This cyst is generally empty, and, according to the French pathologists, it is sometimes obliterated.

No definite time can be assigned for the disappearance of the coagulum and the deposition of this new membrane. As the absorption goes on, the symptoms, in some cases, subside gradually, and entirely disappear; but more generally the improvement is but partial, and, even after the entire absorption, the patient may continue paralytic to the end of his life, the only morbid appearance presented on dissection being the empty cyst.

Of paralysis from ramollissement two cases only are given; this form of the disease not having fallen much under our author's observation, though it appears to be a frequent occurrence in the French hospitals. It is generally met with in the old and infirm, and we have already alluded to our author's view of this affection, viz. its identity with gangrene in other parts of the body, from failure of the circulation in consequence of disease of the arteries. The symptoms do not seem to differ remarkably from those which occur in the other cases of palsy; though, in general, it may be observed that they advance more slowly: one organ, as the tongue, being first affected, and then one or more limbs in succession. Pain in the affected limbs is also a frequent occurrence, and rigid contraction of them has been much insisted on as characteristic of the ramollissement. The patient generally dies comatose, or exhausted with symptoms of low fever.

Besides the above, we meet with other varieties of paralysis exhibiting peculiarities of symptoms, not easily applicable on any principles with which we are at present acquainted. In some cases there is loss of motion without loss of feeling; in some there is loss of motion on one side, and loss of feeling, without any diminution of motion, on the other. In other cases, again, the sensibility is morbidly acute, with intense pain of the affected limbs. Occasionally there is a depraved condition of sensation, cold bodies imparting the impression of heat, and vicè versâ. It does not appear that paralytic limbs are actually colder than healthy limbs, but they seem to lose, in some degree, that remarkable power possessed by living bodies in a healthy state, of preserving a medium temperature, so that they become hotter or colder than sound parts which have been exposed to the same temperature. The recent discoveries of Mr. CHARLES BELL are referred to as likely to throw light on this curious and obscure subject. The morbid condition of the mental faculties, frequently observed in connexion with paralysis, are not less curious and difficult of explanation. One of the most common is a loss of the memory of words; sometimes only of words of a particular class, as nouns, verbs, or adjectives; or the substitution of one word, or one name of an object, in the place of another; and a very singular circumstance in some cases of this kind is, that the patient always applies these words in the same manner. In other cases the patient invents words and names, which to strangers are unintelligible, but which he always uses in the same sense.

We have already incidentally alluded to the views entertained by the author relative to the state of the circulation in the brain in those cases of simple apoplexy in which the patient either speedily and entirely recovers from the most formidable symptoms, or dies without our being able to detect the smallest deviation from healthy structure. A temporary compression of the brain from undue accumulation of blood in the cerebral vessels has in these cases been usually deemed the efficient cause of the symptoms. To this it is objected that, on well-known philosophical principles, such a cause as accumulation cannot operate within the cavity of the cranium, which is a complete sphere of bone, exactly filled by its contents, by which construction the brain is shut up from atmospheric pressure, and from all influence from without except what is communicated through the blood-vessels which enter it. In an organ so situated it is, therefore, contended that the quantity of blood circulating in its vessels cannot be materially increased, unless something give way to make room for the additional quantity, because the cavity is already full; nor materially diminished, except something entered to supply the place which would become vacant. That this principle, so true in physics, holds good in the case of the cranial cavity, appears to be proved by several facts, particularly by the appearance of the brain in animals which have been bled to death. While, in these cases, all the other organs of the body have been found completely drained of blood and blanched, the brain has presented, in this respect, its usual appearance, and in some cases even a state of the superficial veins approaching to congestion.

Dr. Kellie, whose experiments are referred to as the most satisfactory on this point, to the above facts adds the result of observations he made on two subjects who had been hanged: on dividing the scalp in these cases, the blood flowed in such quantities as to afford ample proof of congestion in the vessels exterior to the cranium, but nothing unusual was observed in the brain, except, indeed, that the pia mater was, upon the whole, paler and less vascular than it is commonly met with.

From these facts, the author thinks it highly probable that, in the ordinary state of the parts, no material change can take place in the absolute quantity of blood in the brain, and, as the quantity circulating in its vessels must be divided in a certain ratio between the arteries and veins, it is also probable that the healthy state of the brain will depend on the nice adjustment of the circulation in these two systems. Were accumulation to take place, from any cause, in one of the systems, the necessary consequence would be a corresponding diminution in the other. The arteries going to the brain, for example, might, under the influence of general plethora, be able to introduce more than the average quantity of blood into the head; but this would necessarily lead to a corresponding diminution of the quantity in the veins; and, again, if there be any considerable interruption to the return of the blood from the veins of the brain, such as might be caused by tumors on the neck, or certain diseases of the heart and lungs, a derangement would take place analogous to that supposed in the preceding case—an accumulation in the veins, with a corresponding diminution in the arteries. These views, it must be observed, are advanced by the author as "conjectures," and not pressed as incontestible explanations of the phenomena of apoplexy, though he is evidently disposed to adopt them in preference to the notion of pressure of the brain, which has hitherto been generally considered the efficient cause of apoplexy; but we confess we cannot easily separate the idea of pressure from the modes in which this derangement is supposed to take place.

There are some facts brought forward in this place which, apart from their application to any particular theory, possess considerable importance in a practical point of view: we allude to symptoms indicating deranged circulation within the head, such as headache, sense of fulness and confusion, throbbing, giddiness, and even coma, occurring in a state of the body the reverse of what is usually rendered apoplectic, as in an exhausted state consequent on hemorrhage, or excessive depletion, and in the last stage of debilitating diseases; conditions in which the general volume of blood is evidently much diminished. With reference to this subject, the author makes the following practical remark; and we cannot avoid expressing our belief that, in theory as well as practice, we too often disregard the *apoplexia ab exinanitione* of the old writers, many distressing and alarming symptoms appearing not unfrequently to depend mainly, in the first instance, on a state of general debility, and necessarily requiring a modification of treatment adapted to this state of exhaustion.

"I have been repeatedly consulted under the following circumstances. A gentleman, accustomed to very full living, is seized with an apoplectic attack, or with symptoms indicating the most urgent danger of apoplexy; he is saved by bleeding and other free evacuations, and is kept for some time upon a very spare diet. His complaints are relieved, and, as long as he keeps quietly at home, he goes on without any uneasy feeling. But, when he begins to go abroad, he becomes liable to attacks of giddiness and confusion, generally accompanied by palpitation of the heart and an uneasy feeling about the præcordia. His pulse is now soft and rather weak, and his general appearance indicates the very reverse of plethora, and these symptoms are removed by a cautious improvement of his regimen. This curious fact I have repeatedly had occasion to attend to in the treatment of cases of this kind, and it has always appeared to me to be one of very great interest in reference to the pathology of the brain." (P. 310.)

Treatment of Apoplexy.—The remedies chiefly relied on by the author are bloodletting, general and topical; active purgatives; cold applications to the head; and the strict observance of the antiphlogistic regimen. Bloodletting, with a view to take off the impulse from the arteries of the brain, is recommended to such an extent as shall powerfully and decidedly affect the system, and its employment insisted on without any regard to the hypothetical division of apoplexy into sanguineous and serous; and the only cases illustrative of the treatment which he thinks it necessary to detail are such as occurred in old and infirm people, which might have been considered either as examples of serous apoplexy, or modifications of the disease not admitting of active treatment, yet under such treatment terminating favorably.

The same practice is said to apply equally to the early stages of paralysis. No general plan of treatment can be laid down for this affection in its more advanced stages. The restoration of paralytic limbs is in many cases the work of nature, probably consisting in the gradual absorption of the coagulum. In other cases, however, the recovery is so remarkably sudden as to lead to a suspicion that paralysis may depend on a cause less permanent and irremediable than any of those with which we are at present acquainted.

The last class of affections of the brain which come under review comprehends the *Organic Diseases,* which consist either in permanent changes of the brain itself, or new formations within the head. Under this class the author treats of tumors,—deposition of albuminous matter,—tubercular disease,—induration of the cerebral substance,—ossifications,—and hydatids. The symptoms attending these various morbid changes are not sufficiently uniform in their character to determine accurately the particular seat or nature of the affection. The author, however, gives a general outline of the most common modifications under which they present themselves, and several cases from his own observation, and from other sources, descriptive of each variety of disease.

Want of space prevents us from entering more fully into the subject of organic diseases, which is one of great importance from the protracted nature of the affections to which they give rise, as well as the extreme sufferings of the patient under them. Here, as elsewhere, the author presents a great mass of information, which will be advantageously consulted, both with a view to diagnosis, by those who may have to treat this obscure and too often unmanageable class of cases.

Want of space also prevents us from following our author through the remaining part of the volume, which treats very ably and fully of various diseases, acute and chronic, to which the spinal marrow and its envelopes are liable; but we would strongly recommend it to the attention of our readers. This portion of the inquiry evinces the same industry in collecting materials, and the same caution in making deductions, so conspicuous in the preceding investigations. Indeed, the whole work is rich in facts, and entitles the author to a high rank among the pathologists of the present day, who labour to enlarge our acquaintance with the phenomena of disease, and fix the principles and extend the usefulness of the healing art.

Diseases of the Lungs; being the second Part of a Treatise on the Diseases of the Chest and on Mediate Auscultation. By R. T. H. LAENNEC, M.D. Regius Professor of Medicine in the College of France, &c. (Continued.)

WE resume our analysis of the valuable work of LAENNEC with the Diseases of the Lungs, having in a preceding Number entered fully into those of the Bronchia.

Our author premises a short account of the observations of various writers respecting the intimate structure of these organs, and he is induced to regard the opinions of REISSEISSEN as most correct, who, by means of many microscopical examinations and mercurial injections, was led to believe that the bronchia are subdivided into a multitude of small canals, at their extremities terminating in culs-de-sac of a globular form, arranged somewhat like the component parts of a cauliflower. But, whatever be the intimate structure of the pulmonary tissue, if we examine the surface of a sound lung in a bright light, we can ascertain that its parenchyma, by the grouping together of a number of small vesicles, which are full of air, and separated from each other by white partitions. The largest of these vesicles do not exceed in size the third or fourth part of a millet-seed, and the partitions which divide these groups from each other cross under various angles, so as to form figures of very different shapes. It is along these lines that the black pulmonary matter is deposited, which is so frequently confounded with melanosis.

Hypertrophy of the lungs is the first specific disease mentioned by Laennec, and he begins with it as being the most simple morbid alteration to which our organs are subject. It is marked by increase in the size, and sometimes in the consistence of the part. It is not attended with any inconvenience, unless it happens to affect a part whose increased energy disturbs the functions of the body. In double organs, when one is destroyed, the other acquires increased activity, which after a time gives rise to augmentation of volume. With regard to the lungs, it was observed by MORGAGNI, that, when one lung was compressed, the viscus on the opposite side was sometimes increased in size; and, in fact, this occurs in every instance where one of the lungs is rendered useless for a certain time. When this takes place, the lung increases in volume, becoming at the same time firmer, more elastic, and more compact, so that, when the chest is opened, it will sometimes protrude, instead of collapsing.

Atrophy of the lungs is a state of coma, just the reverse of the preceding. They do not participate in general emaciation of the body, but diminish in size from the effects of pressure, whether applied externally or resulting from the growth of accidental productions internally.

Emphysema of the lungs is divided into the vesicular or pulmonary proper, and the interlobulary. The former of these is, next to hypertrophy, the simplest of all the organic lesions of the lungs, and consists merely in a dilatation of the air-cells. It long remained undiscovered, and Laennec himself for a long time looked upon it as extremely uncommon. He considered it more lately, however, as a frequent cause of asthma. Its anatomical characters may be described as an exaggeration of the natural condition, in which the size of the vesicles is increased till they become as large as millet-seeds, while some attain the magnitude of cherry-stones. These very large vesicles are probably produced, for the most part, by the partitions between several cells breaking down; sometimes, however, according to Laennec, they depend upon the dilatation of one individual vesicle. We remember ourselves to have seen them as large as hazel-nuts. Sometimes the air becomes extravasated under the pleura, forming large irregular vesicles on the surface, as large as a walnut, or even as an egg. To enable us to acquire a correct idea of this disease, the lungs must be inflated and dried: if they are then cut into slices, we perceive that the air-cells are more or less dilated, and some of them ruptured. When we blow into an emphysematous lung, the dilated cells seem to become flatter the more they are distended; a circumstance which is owing to the greater relative expansibility of the healthy cells, which rise to the level of the others. Laennec states his belief that, if we carefully examine the lungs of those who have long suffered from difficulty of breathing, from whatever cause, we shall almost always find some of the air-cells dilated. When the disease exists in a high degree, the lungs rise beyond the borders of the thorax, when this is opened, and the crepitation they afford is of a different character, owing to the air passing from the cells much more slowly than in the healthy state. When a single lung is affected it becomes much more voluminous, so as occasionally to encroach upon the opposite side. Pulmonary emphysema is apt to supervene on very severe dry catarrh; and another occasional cause may be found in very great exertion of the lungs, as in blowing a wind instrument; perhaps, also, tumors developed in the chest, so as to press upon the bronchial tubes, may sometimes produce this affection.

The symptoms of emphysema of the lungs are rather equivocal. Dyspnœa is the principal, and is usually called asthma. The difficulty of breathing is constant, but aggravated by irregular paroxysms, and there is habitual cough. The disease frequently begins in childhood, and may continue many years; for it does not always prevent the patient from obtaining advanced age. The respiratory sound is inaudible over the greater part of the chest, while a very clear sound is produced by percussion. When existing in a high degree, according to Laennec, this disease may be recognised by a sign which he looks upon as pathognomonic, and which he describes under the name of the *dry crepitous rattle with large bubbles;* a sound which conveys the idea of air entering and distending lungs which had been dried: it resembles, in fact, the sound produced by blowing into a dried bladder.

Emphysema of the lungs being almost always the consequence of dry catarrh, is to be treated in a similar manner.

The *interlobular emphysema* is that which follows wounds, by which air becomes infiltrated in the cellular partitions which divide the air cells from each other. To have a correct idea of its anatomical characters, we must inflate the lung, pass a ligature above the affected part, and then dry it in the open air. If the preparation be then cut into slices, we observe the interlobular cellular substance presenting the appearance of a series of cells, of unequal shape and size, all communicating with each other. The most common cause is the prolonged and forcible retention of the breath during powerful exertion. When the extravasation of air is confined to the lungs, it appears to be reabsorbed, and Laennec never saw a fatal result from this disease alone. He gives two cases in illustration.

"I. A young woman, convalescent from a severe acute catarrh, in the winter of 1823-4 presented the most evident signs of this disease on the right side, over a space larger than the hand. The dry crepitous rattle with large bubbles, the friction of ascent during inspiration and of descent during expiration, were heard strongly and distinctly. A sense of crepitation was also felt by the hand during the stronger inspirations: sometimes, however, this was altogether wanting, and at other times it could be excited by pressure in the intercostal spaces. The dyspnœa, which was considerable when I first saw the patient, gradually diminished, and the phenomena above mentioned gradually decreased with it. At the end of two months the young woman left the hospital. I saw her in the ensuing spring, and found her quite well, and without any symptom of emphysema.

"II. A man, aged twenty, came into the clinical wards the 9th May, 1825, affected with a very severe catarrh of three weeks' duration. At this time he had all the symptoms of the acute suffocative catarrh,—extreme dyspnœa, tracheal rattle, high fever. The chest, on percussion, sounded pretty well throughout, but perhaps somewhat imperfectly on the left back; the sound of respiration was feeble or moderate every where; mucous, sonorous, and sibilous rattles, singly or conjoined, existed in different points, and a slight crepitous rattle, with bronchial respiration, was perceived at the roots of the left lung.

"The mucous rattle was felt by the hand in several places, particularly on the sides. There was also a sub-crepitous rattle at the root of the right lung. These latter signs being indicative of an incipient double peripneumony, although there was as yet hardly any expectoration, I ordered eight ounces of blood to be taken from the arm, and prescribed emetic tartar in large doses. This was borne moderately well, and produced considerable action on the bowels, without vomiting.

"On the 12th, the expectoration was glutinous and tinged with blood, and there was severe pain of the right side, in consequence of which cupping glasses were applied. But the tracheal rattle and dyspnœa were somewhat diminished, and it was further discovered by the stethoscope that the peripneumony had not advanced in those points where the crepitous rattle had been found, while it had retrograded in those where the bronchial respiration had been perceptible; this mark of hepatization being now superseded by a crepitous rattle.

"On the 14th, the tracheal rattle being less, and the strength improved, I added some syrup of poppy to the antimonial mixture, and allowed the patient more soup. After this time, the fever, diarrhœa, and dyspnœa did not return; the respiration began to be pretty distinct over the whole chest, and, although it was accompanied by different kinds of rattle, the crepitous was not among them.

"On the 17th, the patient was quite convalescent.

"On the 20th, on examining the chest more closely, I discovered the friction of ascent and descent on both sides of the chest, and also the dry crepitous rattle with large bubbles; the former most marked on the left, the latter on the right side. I made, in consequence, the following addition to the diagnostic ticket:—

"Emphysema interlobulare partium inferiorum utriusque pulmonis."

"This patient left the hospital on the 29th, the signs of the emphysema, although daily decreasing, being still very well marked. At the end of three weeks, he called upon me, when I found him quite well, and without any of the stethoscopic signs above mentioned." (P. 173.)

Œdema of the lungs is constituted by an infiltration of serum into the substance of the organ, so as to diminish its permeability to the air. It is seldom a primary disease, but comes on with other dropsical affections: the most severe cases that Laennec ever met with occurred during a temporary convalescence from peripneumony. Although it is commonly merely a consequence of other diseases, yet in other instances it seems to be idiopathic; and it is conjectured by our author to be a frequent cause of death in children after measles. When it occupies the whole of one lung, this becomes of a pale grey colour, is more dense than natural, and does not collapse on opening the chest. It is, however, nearly as crepitous as before. The symptoms of this disease are not well marked. Impeded respiration, with slight cough and watery expectoration, are generally present. Percussion scarcely affords any assistance, but the stethoscope furnishes two diagnostic marks.

"The respiration is much feebler than might be expected, from the great dilatation of the thorax; and there is at the same time a slight crepitation, as in the first degree of peripneumony, more like a rattle than the natural sound of respiration. This crepitous, or rather subcrepitous rattle, is more humid than in peripneumony, and the bubbles appear larger. It must be admitted, however, that it is sometimes difficult to distinguish these two diseases by the stethoscope alone, without taking into account the general symptoms. When the œdema is very general and in a high degree, the natural sonorousness of the chest is very perceptibly lessened; and in these cases there is slight bronchophonism, particularly at the roots of the lungs. But we can almost always distinguish the œdema from the incipient peripneumony, by the long continuance of the crepitous rattle, and the absence of the general symptoms of inflammation in the former disease." (P. 176.)

Pulmonary Apoplexy.—The principal symptom of this disease is hemorrhage from the lungs, generally of a severe kind, and entirely distinct from those milder cases of hæmoptysis, of which we spoke in the preceding Number.

"Those cases, however, of violent and extreme hemorrhage, which often resist all medical treatment, arise from a very different and more dangerous cause. In these, some part of the pulmonary substance has undergone great changes, being indurated to a degree equal to the completest hepatization. The induration, however, is very different from the inflammatory affection of the lungs distinguished by this term. It is always partial, and scarcely ever occupies a considerable portion of the lungs, its more ordinary extent being from one to four cubic inches. It is almost always very exactly circumscribed, the induration being as considerable at the very point of termination as in the centre. The pulmonary tissue around is quite sound and crepitous, and has no appearance whatever of that progressive induration found in the peripneumonic affection. The substance of the lung is, indeed, often very pale around the hæmoptysical induration; sometimes, however, it is rose-coloured, or even red, as if tinged with fresh blood; but, even in this case, the circumscription of the indurated part is equally distinct. The indurated portion is of a very dark red, exactly like that of a clot of venous blood. When cut into, the surface of the incisions is granulated as in a hepatised lung; but, in their other characters, these two kinds of pulmonic induration are entirely different. In the second degree of hepatization, along with the red colour of the inflamed pulmonary tissue, we can perceive distinctly the dark pulmonary spots, the blood-vessels, and the fine cellular intersections; all of which together give to this morbid state the aspect of certain kinds of granite, as has been already observed. In the induration of hæmoptysis, on the contrary, the diseased part appears quite homogeneous, being altogether black, or of a very deep brown, and disclosing nothing of the natural texture of the part, except the bronchial tubes and the larger blood-vessels. The latter have even lost their natural colour, and are stained with blood. The veins of the affected part, and also those adjoining, are sometimes filled with a firmly coagulated and half-dry blood; a kind of infarctus, which will be noticed afterwards when we come to treat of the diseases of the pulmonary vessels. In scraping the incised surfaces of these parts, we can detach a small portion of very dark half-congealed blood, but in a much less proportion than we can press out the bloody serum from a hepatised lung. The granulations on the incised surfaces have also appeared to me larger than in cases of hepatization. Sometimes the centre of these indurated masses is soft, and filled with a clot of pure blood." (P. 184.)

The principal symptoms are oppression, cough, and pain of the chest, with expectoration of blood, which may be either bright and frothy or black and coagulated. It is generally very copious, returning by fits, with cough, oppression, and coldness of the extremities; occasionally there is vomiting. The quantity of blood expectorated is sometimes very great: Laennec has known ten pounds lost in forty-eight hours.

The treatment consists in free venesection at the onset of the disease, and our author also recommends purgatives; he has also tried tartar emetic in one or two desperate cases, and has never known any bad effect result from it. "In the present case, still more than in the bronchial hemorrhage, we must not give astringents and bitters until the disease has assumed a chronic character."

A Grammatical Introduction to the London Pharmacopœia and Preface; or, the Student's Self-Instructor. Containing a Latin Grammar, Exercises, and Vocabulary; a Syntactical Analysis of the Pharmacopœia and of the Preface; and an Appendix of Words most frequently occurring in Physicians' Prescriptions. By S. F. LEACH. Second Edition, considerably enlarged.—18mo. pp. 180. Anderson, London, 1828.

WE are glad to find that Mr. LEACH has been encouraged to publish a second edition of the above little volume. Nothing was ever more called for than a work of this description, which, whilst it teaches the grammatical construction of the Latin language accurately and fully, does so by taking all its examples from the Pharmacopœia, as well as the declension of its nouns, adjectives, &c.; so that the pupil learns his text-book at the same time that he imbibes a knowledge of the language in which he is obliged to read it when passing his examination. The second edition differs considerably from the former, containing an entirely new division, entitled "Directions for Parsing, and a Syntactical Analysis of the Pharmacopœia and Preface:" this is so complete that the student, who shall thoroughly understand this book, cannot fail to possess a very fair and accurate grammatical knowledge of the structure of the Latin tongue. We beg, therefore, strongly to recommend it to those young men who have not been fortunate enough to receive a classical education. It is a short, but fair and legitimate, road to attain an indispensable point: it will not only certainly effect this, but it may even excite a thirst for classical knowledge, and lead the pupil to quench that thirst from the pure fountains of the ancient writers.

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

PHYSIOLOGY.

Dentition.—At a late meeting of the Academie de Medicine, M. Reveillé Pariset read a note on the eruption of the teeth, and its anomalies. He cites, after Borelli, the case of a woman of sixty years, who never had teeth. Louis XIVth and Mirabeau were born with teeth; and very recently a girl was born with two canine teeth, the others made their appearance a few days after. It has been said that the appearance of teeth before birth is a sign of strength, vigour, and longevity. M. Oudet states that, in the course of dissections, he had sometimes met in fœtuses the rudiments of the teeth in a state of suppuration, which might account for the case of the woman mentioned by Borelli as having never had teeth. M. Moreau stated that the being born with teeth in the mouth was far from being really a sign of strength or longevity; for he had seen a fœtus of seven months come into the world with seven teeth, and died some little time after. *(Revue Med.)*

PATHOLOGY.

A Case of the Foramen Ovale remaining open in the Adult, with a general Narrowing of the Aorta and Arteries, without the Morbus Cyanosus.—It has generally been supposed that the cause of the blue appearance of the skin in the morbus cyanosus was the aperture between the auricles of the heart continuing pervious after birth. M. Miguel has lately met with a case where this communication continued open, and yet there was no blueness of the skin; proving that the generally supposed cause of the discoloration is not correct. The case is in itself interesting.

Jean Antoine Adam, a jeweller, æt. thirty-six, came into La Charité, under M. Cayol, August 1825. This man was fair, of small stature, and had never suffered from any severe disease; his complexion was red and white. When young, he was subject to occasional difficulties of breathing, coming on in fits, once terminating in syncope: antispasmodics usually removed them. He was married, and had several children. At the age of thirty, without any apparent cause, the fits of difficulty of breathing became more intense and more frequent. During eight days, he had daily three or four attacks, each appearing likely to terminate his existence. His face suddenly reddened, acute pain in the heart and head, with palpitations, continuing for about a minute; then he grew pale, and fainted. When the attack passed, he felt quite well, till another came on. This state (strange to say!) was looked upon as the indication of some pernicious fever, and large doses of quina were administered to stop its course, but which increased it. After continuing thus during a week between life and death, a change took place: the difficulty of breathing, which had been periodical, became constant, and increased in violence; and the headache became intense. Venesection was prescribed, and the man felt himself resuscitated by the operation, ("Je ressuscitai a mesure que mon sang coulait.")

For some weeks he was relieved, when the symptoms became again aggravated. He was again bled, and with similar success; and to this frequent bleeding, and the application of leeches, he owed the preservation of his life for six years. He says himself that there were more than 6000 leeches applied, and that he was bled seventy-two times during that period.

At the present time he presents the following symptoms: Face pale and emaciated, without the least appearance of the violet or blue colour of the lips, cheeks, ears, or any part of the body; extreme anxiety; respiration short, oppressed, and laborious; orthópnœa; short, teazing cough; the chest resonant on all points, and the respiratory murmur apparent throughout; the whole body is agitated by violent palpitations of the heart; the pulse was small, unequal, intermittent; the limbs œdematous; the abdómen large and tense, and gave an evident fluctuation; the extremities were cold, and the general temperature of the body was under the natural standard; the bowels inclined to constipation.

M. Cayol, in his diagnosis, stated that there was considerable hypertrophy of the left ventricle, with narrowing of the orifice of the aorta by a commencing ossification of the sigmoid valves. A diuretic mixture, with half a drachm of acetate of potash, was prescribed, with half a drachm of Aq. Lauri Cerasi.

The patient went on getting worse and worse. The smoking Datura Stramonium was tried, and for a short time gave much relief. The powder of Belladonna was also tried, and it appeared to sooth him a little.

On the 11th of September he died, and the body was opened thirty-six hours after death. On opening the chest, the heart, distending the pericardium, and pressing upon the left lung, appeared twice the natural size. The right ventricle and auricle contained some clots of black blood: their size was larger than natural. The auricles communicated by an opening as large as a two-franc piece, evidently the foramen ovale, not obliterated. (*Revue Méd.*)

Hereditary Predisposition to Cataract.—Madam St. Pierre, accompanied by part of her family, presented herself at the public consultation of M. DUPUYTREN. Among the individuals of this family, so many are affected with cataract, that it is difficult to explain the occurrence without referring it to hereditary disposition. At the age of upwards of sixty, Madam St. Pierre's sight first began to be affected; eighteen months afterwards, both the crystalline humors were entirely opaque. The operation of depression was performed on one eye by M. D. with perfect success. No operation was performed on the other eye.

At twenty-eight years of age, the sight of this person's daughter began to fail; soon afterwards she became unable to do more than merely distinguish day from night; the pupils were moveable, and the eye otherwise sound. Two years afterwards, M. D. depressed the cataract in one eye: the patient recovered her sight, and ten years afterwards the vision continued to be perfect. Some time afterwards, hearing of the reputation of M. FORLEUZE, she applied to him, and had the cataract of the other eye extracted: unfortunately, inflammation ensued, which went on to produce total opacity of the cornea, and the patient lost the eye entirely; but the inflammation produced no ill effect upon the eye formerly operated upon by M. Dupuytren.

The son of this woman, seventeen years old, was already suffering from two cataracts: they were both depressed at the Hôtel Dieu, and the lad recovered his sight.

At the time this lad was admitted into the hospital, Madame St. Pierre also brought another of her grand-children, the chrystallines of whose eyes had begun to be opaque; and one little girl besides, who complained of seeing all objects through a mist, which, as every one knows, is one of the earliest symptoms of cataract. Thus it appears that a grand-mother, her daughter, and three grand-children, were all affected with the disease.

PRACTICAL MEDICINE.

Treatment of Epilepsy.—For several years many experiments have been tried in Germany, which appear to prove the anti-epileptic powers of the Artemesia Vulgaris. By many authors its virtues have been much extolled. Dr. **Burdal**, of Wiebal, and Professor **Hufeland**, have used it, gathered in October, and reduced to powder, with much success in many cases of epilepsy. The dose is from fifty to seventy grains. It has been generally given in warm small-beer. A copious perspiration mostly follows, and a few doses have frequently succeeded in effecting a cure. The cases in which the artemesia has been most beneficial, have been those in which the paroxysms of the disease occurred frequently and periodically. Very satisfactory evidence is adduced upon this subject by E. **Graefe**, who speaks confidently of the anti-epileptic powers of this medicine. According to the latter authority, it has been used with equal success in cases of catalepsy, but requires to be continued for a longer time than in epilepsy. Neither the infusion nor the decoction of the root can be depended upon. In one case of epilepsy recorded by Graefe, the patient had been afflicted with the disease for several years. He took two ounces of the powdered artemesia, in divided doses. The violence of the paroxysms gradually subsided, and in one month from the first employment of the remedy they entirely ceased. In the second case of a cataleptic woman, it was equally successful, after various other means had been employed in vain. This patient took altogether four ounces of the powder. (*Hufeland's Jour.*)

The following case is related by Dr. **Bona**, of Platow: A man, forty-one years of age, had been subject to epilepsy for thirty years. The cause of the original attack was unknown. The paroxysms at first occurred at long intervals of time, but at length they appeared about every fourteen days, and lasted a considerable time. Being left alone in a room with a fire, he was seized with a fit, and fell under the grate. He was severely burned in the left thigh, and extensive ulceration followed. By appropriate treatment, the parts healed, and from this time the patient remained free from attacks of epilepsy. (**Hufeland**'s *Journal.*)

Dr. **Urban**, of Bernstadt, recommends the Ammoniacal Sulphate of Copper in epilepsy, when purely nervous. He relates five cases in which its employment has been entirely successful. The first was that of a young man, in whom the fits were renewed every fortnight, unaccompanied with any other affection, excepting a spitting of blood, which was combated in the first place with bleeding and other antiphlogistic means. The attacks of epilepsy afterwards persisting with their former violence, Dr. Urban prescribed eight grains of the ammoniacal sulphate of copper, to be mixed with twenty-four grains of sugar and twenty-four grains of crumb of bread, and formed into forty-eight pills, of which the patient took three morning and evening, increasing the dose by one pill every two days. The young man had only five fits from this period, each at a longer interval than the preceding, and he has now remained well two years.

In the second case, the epilepsy was produced by the sudden intelligence of the woman's husband having been assassinated, and the medicine was given in rather smaller doses, and in the form of powders. The first six powders, however, produced nausea and vomiting, and it became necessary to omit them for a day. They were afterwards resumed in the same dose, which was at length increased to the amount of one grain of the salt in the day. It is to be remarked, that in this case the attacks were not diminished in frequency for some time, but they soon became of shorter duration and less violence. She finally recovered, after having taken twenty-six grains of the salt altogether. (*Ibid.*)

Delirium Tremens.—Dr. Coates has made some observations on this subject in a recent Number of the *North American Medical Journal*, from which he draws the following conclusions:

1. The disease is a delirium, and not a mania; and this distinction should be attended to, both for medical and legal reasons.

2. It consists in a heightened activity of the sensorium; and this appears to arise from the generation, in that organ, of an unusual vital power, which is not, as in common, exhausted by the narcotic poisons habitually used. This is not considered as an hypothesis, but the expression of a fact existing in nature.

3. The delirium may be combined with other diseases and injuries, situated in many different parts of the body.

4. When violent, it obscures and renders imperceptible most of the symptoms of the co-existing disease.

5. It is doubtless necessarily accompanied, as all vital excitements are, with an unusual amount of the circulation of the blood in the organ affected; and is, from this cause, sensibly influenced by cups, blisters, and emetics. It is not so far checked by the use of emetics as to render these advisable as a leading means of cure. It is not sufficiently under the control of the general circulation to be cured by venesection, or to be sensibly relieved by it without such an exhaustion as is highly dangerous to life.

6. It is entirely and absolutely under the control of opium; although the fevers and other diseases which are liable to accompany it may be by no means so.

7. It admits of very large doses of opium, which are not productive, either at the time or subsequently, of any injurious consequences, provided they are not repeated after a tendency to sleep is evinced.

8. The patient must *sleep or die*. There is no alternative. Yet the physician should personally watch the effect of very large doses of opium.

9. There is no distinction of stages which need occasion a moment's delay in resorting to opium.

10. Purgatives are of no use in this delirium; but it is necessary to prevent costiveness subsequently to the administration of opium. Purgatives may be

necessary for diseases which exist at the same time; but, when this is the case, they are, in general, most advantageously postponed till after sleep has been obtained.

11. Gentle stimulants are frequently useful during the convalescence; but these should not resemble ardent spirits; and an excellent and sufficient one is capsicum. Nor should any ardent spirits, unless indicated by peculiar circumstances, be given during the paroxysm.

MEDICAL JURISPRUDENCE.

Rolfe *versus* Stanley.—The following remarks on the above trial are taken from the *Medical Gazette*, and we entirely concur in the view there given of the subject.

The particulars are as follows: Mr. Rolfe, the son of a tailor in Dean-street, Soho, fell from his horse, and bruised his knee. A general practitioner, who lived in the neighbourhood where the accident happened, having washed and dressed the part, conveyed the patient home, but feeling some doubt and anxiety about the nature and result of the injury, he consulted Mr. Stanley, one of the surgeons of St. Bartholomew's Hospital, and joint lecturer with Mr. Abernethy on anatomy and surgery, a gentleman well known throughout our profession for that combination of zeal, talent, and information, so necessary for a teacher in so eminent a medical school. When Mr. Stanley examined the knee, some hours had elapsed since the accident: the part was much swelled; there were two wounds below the knee; and about an inch and a half from the nearest, on one side of the knee-pan, a hard body, about the size of a nutmeg, could be felt deep under the skin. It must have been one of two things, either a foreign body from without which had penetrated through the wounds, or a piece of bone which had been chipped off from the knee-pan, or from the adjoining condyle of the femur.

The latter appeared to Mr. Stanley to be most probable, and under this idea his treatment was correct. But it was a piece of flint; and, supposing this to have been ascertained at the time, what was to be done? The foreign body had penetrated so far, as to render it probable that it had pierced the capsule, and entered the joint. Now, to have followed it here with a view to its extraction, would have led to such interference with the parts, as must have been attended with a great aggravation of the danger. So that, in either case, the treatment adopted was the only one admissible under the circumstances; because wounds of the knee-joint are always extremely hazardous; a hazard which is much increased by all unnecessary disturbance of the parts.

But, supposing Mr. Stanley had known that it was an extraneous body, it was not near the surface, but had every appearance of being deeply seated, probably under the fascia, and a force capable of driving it in an inch and a half beyond the wound, would likewise have been capable of driving it deep. It was like a bullet in a gunshot wound; and it is settled practice in such wounds, that it is bad surgery with probe and knife to grope after the bullet. "The extraction of foreign bodies," says Mr. Samuel Cooper, "ranks as one of the most urgent motives for the dilatation of the wound, and no doubt it is right to remove at first as many of them as possible. Their lodgment irritates the wound, causes violent nervous and inflammatory symptoms, and copious suppuration; circumstances which the timely extraction of them may prevent. Yet let it be remembered that the extraction of foreign bodies is frequently attended with immense irritation, and that, while they lie too firmly fixed in parts, it is often a matter of impossibility. After the sloughs have separated, and the wound has become widened, suppuration frequently does not prevail long before the extraneous substances become loose, spontaneously approach the skin, and easily admit of removal without any dilatation. Hence it is generally prudent to extract at first only such foreign bodies as are near the external opening, quite loose, and removable without much irritation; or such as press on parts of importance, and thereby excite dangerous symptoms. The surgeon should avoid interfering with those which are deeply and firmly lodged in the wound. He should await suppuration and the detachment of sloughs, and, when the foreign bodies become moveable and apparent, he should extract them with or without an incision, as circumstances may demand. The examination of the wound ought to be made as much as possible with the finger, which irritates less, and feels more distinctly than a probe."*

Mr. Abernethy, speaking on the same subject, says, "It is very impertinent and injurious to be searching after bullets: the common prejudice is all on the other side of the question; the patient will say, 'What! have you not extracted the bullet yet? Oh, how much I wish it out.' Indeed, we meet with it in almost every novel, that Sir Harry Somebody has fought a duel, and has been shot, but the bullet has been extracted, and hopes are entertained of his recovery; as if the hopes of his recovery all depended upon the extraction of the ball. Now, I have been in the habit of mentioning a case here, to show the inutility of searching for bullets. Sir Ralph Abercrombie received a musket-shot on the upper part of the thigh-bone; the ball penetrated through the muscles, fascia, and so on, and lodged in the upper part of the trochanter major; the surgeons were very anxious to extract the ball, and made many attempts to do so, enlarged the wound, and probed and searched for the ball: however, they did not extract it, and the General, on his passage home, died." [The wounds made in searching after the ball became affected with erysipelatous inflammation, and thus occasioned death.] "The surgeon of the ship, after he was dead, examined the wound, and found the ball sticking so firmly in the trochanter major, that he was absolutely obliged to remove a portion of the bone with a trephine before he could get it out."

Even, therefore, if it had been known that the foreign body was a stone, it would have been hazardous practice to have probed for it and cut it out. The result of the case is surely in favor of the gentler treatment. The tailor is alive and well, and can bend his knee. The result of the opposite practice might have been an opening into the joint, inflammation and destruction of it, loss of limb or loss of life.

Mr. Stanley pursued the former practice. A splint was applied to prevent the motion of the joint, and the best remedies were employed for subduing inflammation. The inflammation subsided, leaving the knee, however, somewhat swelled, and the hard body still to be felt under the skin. At this period the patient went for the recovery of his health to Hammersmith: an imprudent use of his limb (he went to the Duke of York's funeral,) occasioned a return of inflammation; and Mr. Lilly, a general practitioner, was consulted ten months after the accident. This gentleman, when he first examined the knee, had no suspicion of what the hard body really was; he, like Mr. Stanley, supposed it to be a broken portion of bone; and it was not till he had attended the patient two months, and then only because the skin broke, that he discovered its real nature. Hereupon he enlarged the new opening in the skin, and extracted a flint about the size of a nutmeg; two smaller fragments were also removed; the opening soon healed, the swelling of the knee subsided, the patient recovered the possession of his health and the use of his limb, so that he can now sit cross-legged on his father's board. But, thinking that Mr. Stanley ought to have detected the nature of the hard body and removed it, and that, if this had been done, he should have been saved several months of suffering and disability, he commences a suit against him for unskilful treatment, and the cause was tried on Wednesday, the 13th of February. Mr. Cross was employed for the plaintiff, Mr. Sergeant Taddy for Mr. Stanley, and Judge Burrough presided. Sir Astley Cooper, Mr. Abernethy, Mr. Bell, Mr. Brodie, Mr. Travers, and Mr. Green, were subpœnaed by Mr. Stanley, and testified the high opinion they entertained of his ability and knowledge in his profession; and that, if they had been consulted about the case, they should have formed the same opinion, and employed the same treatment. The only medical men examined on the side of the plaintiff were the two general practitioners; the one who was called to him on the first occurrence of the accident, and who stated that Mr. Stanley examined the knee with the utmost degree of attention; and the other who extracted the flint: and this gentleman acknowledged that, when he first saw the knee, he concluded that the hard body was a piece of bone, and that he did not suspect what it was till two months afterwards, when the skin gave way and uncovered it.

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* Surg. Dict. p. 549.

Thus, although an error was certainly committed in the original opinion of Mr. Stanley, yet there was uniform and overwhelming evidence that this error was not the result of that neglect or that ignorance which the law of the land considers an object of punishment, but such as any man, even the most eminent surgeon, might, and in fact does, occasionally commit. There was evidence, moreover, that this error did not in the slightest degree alter the result of the case; for had Mr. Stanley known from the beginning that the hard body was a piece of flint, he would not have interfered with it. Judge Burrough summed up to this effect, and almost every body in court so fully anticipated that the plaintiff would be nonsuited, that the reporters of the evening papers, who left the court before the verdict was returned, ventured to publish it as given in favor of the defendant; but, to the astonishment of every one, the jury retired, and, after being absent an hour, returned a verdict of £30 damages against Mr. Stanley.

An eminent counsellor being consulted about a claim, wrote as follows: "I am clearly of opinion that there is no claim either in equity or law, but, as it is impossible to tell how the evidence may impress a jury, I advise it to be tried." And an eminent equity judge once said in our hearing, "I think I had better decide, rather than send the question to the toss-up of a jury." So much for the boasted trial by jury, far more valuable as a means of protecting the liberty of the subject against the oppressions of government, than a means of insuring justice between man and man.

On the unexpected and extraordinary result of this trial, we shall say nothing to the barristers* and the judge, because the former confined themselves to their duty, and the latter performed his; but what shall we say to the plaintiff, the jury, the law, and the public? We will grant, what there is no doubt about, that Mr. Stanley's opinion with regard to the nature of the foreign body turned out to be erroneous; and we will grant also, although there is absolute proof to the contrary, that the error of opinion occasioned an error of practice, and thus led to the suffering and disability of the patient; and then we will ask, whether it is just that the medical should be the only one of the learned professions in which an error of judgment is punishable by law? A statesman may commit blunders in the management of the currency, and by so doing raise such a hurricane in the commercial world as strips thousands of the most opulent bare to the very branches, and reduces them for life to poverty and wretchedness. A clergyman, from preferring dining out and fox-hunting to his parochial duties, or even a well-meaning priest, for want of a "searching and awakening" power in his discourses, may so neglect or misconduct his spiritual duties that his parish abounds in immorality and thoughtlessness, and shoals of souls are lost for want of proper and penetrating instruction in religion. A barrister, from ignorance of his brief, or want of zeal in his cause, from ignorance of law, or from defective powers of statement, may lose a cause, which a more zealous, learned, or eloquent counsel might have gained. In all these cases, the error is punished only by the censure of those who suffer from it, or whose minds happen to be directed to it; but if a tailor tumbles from his horse and gets a flint into his knee, and the surgeon mistakes the flint for a piece of bone, he is prosecuted for the error of opinion, though it leads to no error of practice, and twelve men, who know no more on the subject than they do about the philosopher's stone, condemn him to a heavy fine. Do the public suppose that medicine is so much easier than legislation, theology, and law, that physicians and surgeons ought to be always right, or, if occasionally wrong, they can be so only from carelessness or ignorance so gross as to deserve legal punishment? On the contrary, the public ought to know that it is so difficult that it has been emphatically called "a conjectural art," and that no human being, whatever may be his attention, knowledge, and judgment, but must sometimes err, and the error may involve health, and even life. It not only is so now, but it must continue so, as long as man is man, and human nature is liable to erroneous opinions. For many years we have had frequent intercourse with the most eminent physicians and surgeons of our time, some dead, others still alive, and have observed them engaged in their practical duties, in the sick room by the bedside, over one or other of those bodily afflictions which it is our painful lot to live among, and which we exert our best efforts to relieve; and we do not remember one among them, however high his eminence, or great his knowledge, who has not been sometimes wrong, and thus occasioned more or less injury to the patient. Our profession brings enough of toil and of anxiety, without the additional evil of being liable to legal prosecutions. Of all the learned professions, or, to speak more generally, of all the pursuits in which learning or science is applied to practical purposes, the medical profession is the most oppressed by the public and the law. We are persecuted in the prosecution of our anatomical studies; imprisoned or fined for procuring dead bodies by stealth, although we have no other mode of obtaining them; and then, if we commit an error in the practice of our profession for want of this knowledge, we are held up in a court of justice to the gaze of the public, clawed by some tiger of a barrister, and heavily fined. Thus, we are punished for the pursuit of knowledge, and then punished for the want of it. In eastern countries, if the patient dies they cut off the doctor's head. In England, they leave his head upon his shoulders, but they cut up his reputation, which is almost as bad.

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* Mr. Cross talked a great deal of nonsense about the splints being put on to compress the supposed piece of bone against that from which it had been broken; whereas they were applied, as they always are, to prevent the motion of the joint.

IMPUTATION OF POISONING.—*Detection of a Conspiracy, by the inconsistence of the evidence for the prosecution with the chemical analysis and with the effects of poison on the system.*

CASE I.—Samuel Whalley was indicted at the York spring assizes, in 1821, for maliciously administering poison to Martha King, a dress maker, with whom he cohabited, and who was pregnant by him. The indictment contained three charges:—a charge of administering poison for the purpose of killing the woman; another of administering it for the purpose of destroying the living child in her womb; and a third of administering it for the purpose of procuring abortion, the child not being quick.

The moral evidence against the prisoner was derived almost entirely from the testimony of the prosecutrix King, and that of another woman Merryweather, who lodged in the same house with her. Its purport was, that the prisoner had, under promise of marriage, cohabited with King, who became with child in consequence; that the marriage was put off, after proclamation of banns, on the ground of its being inconvenient at the time to the prisoner;—that, on two occasions after this, and recently before she was poisoned, he tried to prevail on her to take drugs for the purpose of destroying the child, and maltreated her because she refused;—that she had a dream about purchasing poisoned tarts, and that a fortnight afterwards the prisoner brought her several tarts, which, while he declined partaking of them himself, he urged her to eat, "because he should like young Samuel (the fœtus in utero) to have one;"—that she did not take any that day, but ate some the following afternoon;—that after she had eaten them, and was taken ill, the prisoner paid her a visit, and in quitting her made a remark which implied he thought her dying, and knew she had taken something deleterious.

The prisoner, on the other hand, while he admitted the cohabiting, the promise of marriage, and even that a day had been fixed for it, stated that it was broken off in consequence of his having caught her in a suspicious situation with another man;—that she frequently threatened his life on account of his refusing to make good his promise to marry her;—that he carried the tarts to her, because she asked for them on account of a curious dream she had about tarts;—and he proved, by two witnesses, that she had arsenic in her possession, although in her evidence she denied she ever had any, or knew what it was. The defence was therefore grounded on a charge of conspiracy on the part of King and Merryweather.

The medical evidence was to the following effect:

According to the deposition of King, corroborated in many points by that of Merryweather, she felt an "unpleasant coppery taste" while eating the first tart, and this was so much increased while she was eating a second that she did not take the whole of it. Half an hour afterwards she became sick, felt a burning heat and pain in the stomach, was seized with trembling and feebleness of the limbs, and subsequently had some vomiting. Her fears being in consequence excited, she sent for Mrs. Merryweather, and along with her examined two tarts which remained; and they found a white powder hidden under the preserves. They both became alarmed, and Merryweather immediately set off in quest of a medical man. But it appeared that, notwithstanding her state of alarm, the messenger went to a gentleman who lived a mile off, who had never attended King before, and to whose house she did not know the way. Mr. Thackrah, surgeon at Leeds, who was the gentleman called, arrived at Mrs. King's house about six in the evening, two hours nearly after she had taken the tarts. He found her agitated, and complaining of the symptoms mentioned above; but "the pulse was not much accelerated, the tongue exhibited nothing particular; she did not complain of urgent thirst, or sense of heat in the mouth or throat; nor did she seem to have acute pain." As she told him she had not vomited, he immediately administered an emetic, and soon afterwards another, as the first did not operate. She then vomited. The matter discharged was preserved in a wash-hand basin, and taken home that evening by one of his pupils who had accompanied him; but Mr. Thackrah admitted that the prosecutrix might have introduced a small quantity of poison into the basin before she vomited.

He left her about seven, and sent his assistant to see her at ten. Meanwhile she had, according to her own account, another attack of vomiting, the matter of which she preserved, and showed to Mr. Thackrah at his visit next day; but she did not speak of it that evening to the assistant. This stuff was not taken away for some days, as Mr. Thackrah did not happen to have any convenient vessel with him at his second visit. On this occasion he found her complaining of headache and pain in the bowels, and the tongue was furred; but she had no particular illness that was apparent, nor was there subsequently any of those effects which are usually caused by small doses of arsenic. After a few days' attendance, deeming her well, he discontinued his visits. She, as well as Merryweather, however, stated at the trial that she had been obliged to keep her bed several days, and that she had never been well afterwards.

The chemical analysis of the various suspected articles was conducted partly by Mr. Thackrah, partly by Mr. Walker, a chemist of Leeds.

In the two tarts, which were delivered to Mr. Thackrah, at his request, on his first visit, they found under the preserves a white powder, which proved to be arsenic. Mr. Thackrah remarked that, when a portion of the powder, with a little of the preserve adhering to it, was dissolved in distilled water, and alkalised with subcarbonate of potass, the sulphate of copper caused a green, and the nitrate of silver a yellow, precipitate; and Mr. Walker determined the quantity in each tart to be between four and five grains.

Mr. Walker likewise examined the matters of vomiting, and detected arsenic by the same tests in both. The quantity in the first was exceedingly minute,—not above one grain dissolved in at least three pints of fluid. The second matters of vomiting contained a much larger quantity,—namely, between twelve and fifteen grains; and, from the observations Mr. Walker made, "he doubted very much whether the arsenic of this analysis had ever been in a human stomach."*

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* Mr. Walker having died since the trial, I have not been able to procure all the particulars of his experiments. The fact that arsenic has not been in the stomach may be ascertained by finding that the precipitates procured from the alleged matters of vomiting by the liquid tests, and more particularly by sulphuretted hydrogen, do not yield empyreuma, or exhale the odour of burning animal matter in the course of reduction.

Such were the facts of this important case. The following are the conclusions which may be drawn from the medical evidence:—

In the first instance, Mr. Thackrah deposed on the trial that, although the illness of the prosecutrix was undoubtedly caused by something which had disordered her stomach, he did not think her situation corresponded with that of a person who had taken so much arsenic as was to be inferred from what was contained in the tarts analysed;—and that, if he had heard nothing about poison, he would not have supposed she had taken any. He admitted at the same time that he could not affirm positively, from the symptoms, that she had not taken a *minute* quantity of arsenic, as the symptoms of arsenical poisoning are subject to great variety.

In the second place, Mr. Walker deposed, in regard to the coppery taste said to have been felt by the prosecutrix while eating the tarts, that arsenic could not cause such a taste, because its taste "*is sweet*, not like copper; if mixed with sweet tart, it could not be perceived at all."

Thirdly, according to the analysis of the powder in the tarts which were not eaten, the prosecutrix could not have taken above *ten* grains of arsenic in what she did eat. Now, even after repeated attacks of vomiting, the last matters discharged contained *at least twelve grains;* which clearly showed that arsenic had been mixed with the stuff after it was vomited,—if, indeed, there was vomiting at all. The same inference is deducible with still greater certainty from the comparison of the quantity contained in the last matters of vomiting with that contained in what was discharged a short time before when vomiting was encouraged by emetics and the free use of diluents; the latter quantity not being above *one* grain. The prosecutrix indeed stated that the matter from which the larger quantity was procured had been discharged into the same bason as that from which the former matters of vomiting had been taken, and that a considerable white sediment had been left in the bason when Mr. Thackrah transferred the contents into another vessel. But Mr. Thackrah was sure that no perceptible sediment was left.

Fourthly, Mr. Thackrah deposed, that if so great a quantity had been taken as to render it possible for twelve or fifteen grains to be vomited two or three hours afterwards, it would have occasioned the most violent symptoms, and probably death.

It is impossible to conceive more pointed evidence. The medical investigations were alone amply sufficient to decide the nature of the case.

The prisoner, as will be readily anticipated, was found Not guilty. It may be satisfactory to add, that the prosecutrix King and the witness Merryweather were immediately committed on a charge of conspiracy. But the judge, considering the unfortunate state into which one of them had been brought by Whalley's means, and that they had signed a paper to the effect that all the charges made against him were false, and the result of a conspiracy against him, acceded to Whalley's request to allow them to be discharged.

POISONING WITH ARSENIC.—*Perforation of the Stomach. Detection of the Poison in very minute quantity. Inefficiency of the liquid tests.*

CASE II.—Margaret Wishart was tried at last Perth spring circuit for the murder of her sister Jean and her natural child, by administering to them arsenic or some other poisonous substance.

The deceased Jean Wishart was totally blind, and in consequence had been for some time a burden on her sister, the prisoner, who in particular always made ready her food. The blind woman had a lover in the person of a man, Roy, a lodger in the house, by whom she had a child about four years before her death, and by whom she was again pregnant at the time the poison was supposed to have been given. This man was also on very intimate terms with the prisoner, and there was strong reason to believe that he cohabited with her. Such being the state of the household, it may be conceived that the several members of it could not be on good terms with one another. Accordingly, although several neighbours bore testimony to the friendly disposition of the prisoner towards her sister, those who lived in the house with them deposed that the deceased frequently complained of the usage she received both from her sister and from Roy; and she asked one witness to take her as a lodger, as, on account of her pregnancy, she was apprehensive of ill treatment at their hands, and even used the expression that "she would not get leave to live."

On the evening of Tuesday the 3d of October, she was seen by a neighbour taking porridge to supper; the prisoner and a man who lodged in the house being present, but not joining her. About twenty minutes afterwards she felt unwell, and blamed the porridge as the cause; and in a few minutes more she was attacked with vomiting. During her subsequent illness, which ended fatally on the evening of Saturday the 7th, she had not any medical attendant, except that on Friday, when she was taken in labour, and a midwife sent for to deliver her. Several people advised the prisoner to get a medical person to attend her, and the deceased herself asked her to do so; but she refused, saying that she could not afford it, and that all the doctors in Arbroath could not do any good. She likewise refused to send for another sister who lived in the same town.

A few weeks before her trial, the prisoner added an important circumstance to the moral proof, which, it will be seen, was previously by no means strong, by attempting to suborn a witness. A young woman, who visited her in prison, said, in presence of the jailor and others, that she had accompanied the deceased to various shops in Arbroath, to ask for poison, and that the deceased actually got arsenic at one of them; but on the trial she confessed that it was all a fabrication, and that she had been prevailed on to tell it by the prisoner's repeated importunities.

No evidence could be procured that the prisoner had either purchased arsenic or had it in her possession.

The medical evidence in this case rested chiefly on the morbid appearances and chemical analysis.

The account which could be procured of the symptoms was exceedingly imperfect, as it merely went to show that the deceased was affected with more or less vomiting, purging, thirst, and general uneasiness, from the evening on which she was taken ill till that on which she died; that she was delivered of a living child on Friday; and that on Saturday morning the limbs were cold and stiff. An important point regarding the symptoms, however, was ascertained, namely, that they began within half an hour after a meal. The symptoms do not appear to have been violent. Such as they were, the witnesses for the crown all agreed that they might be caused by arsenic, but admitted that they might equally be caused by natural disease.

The body was disinterred for examination on the 15th, eight days after death, by Drs. Arrot, Sharpey, and Palmer; and the following is an account of the chief appearances described in their report: On opening the abdomen, they found about a pint of red-coloured liquid in the cavity of the peritoneum; a small perforation on the anterior surface of the stomach, through which a small quantity of black fluid escaped; the external surface of the intestines red and highly vascular; the uterus not reduced to its natural size; the other viscera healthy. The stomach contained a thick, opaque, brownish black liquid, and a little solid vegetable matter. Its inner surface was very vascular, and marked in different places with dark brown spots of various sizes; and the villous membrane was abraded here and there. The intestines were internally very red, and quite empty.

A portion of the stomach, including the perforation, together with part of the contents, was sent to me for examination and analysis. The stomach having been preserved in a bottle along with the contents, and the examination not having been made till the 21st, the vascularity had entirely disappeared, and the membranes had imbibed the fluid like a sponge; but the nature of the perforation was quite distinct. The aperture in the peritoneal coat, which was about the size of a pea, was surrounded by a dark ragged margin, and the inner coats were more extensively destroyed around it.

The chemical evidence was decisive of the presence of arsenic in the fluid part of the contents, and still more in the coats of the stomach.

Drs. Arrot, Sharpey, and Palmer, made several solutions by diluting and filtering the contents, and by boiling portions of the stomach and filtering the decoctions. In none of these fluids did the ammoniacal sulphate of copper, or ammoniacal nitrate of silver, indicate the presence of arsenic. But the sulphureous test, in all its forms, gave satisfactory indications. After some preliminary trials with sulphuretted hydrogen water, and the hydrosulphuret of ammonia with the subsequent addition of muriatic acid, they united the various fluids, and subjected them to the process which I have recommended.* The liquor was acidulated with acetic acid, and then subjected to a stream of sulphuretted hydrogen; upon which a yellow precipitate was procured, that yielded by reduction with the black flux, in three different trials, patches of metallic incrustation. I regret that the limits of this abstract do not permit me to give more than the substance of the able report of the Arbroath gentlemen. The whole investigation reflected the greatest credit on them, but particularly the chemical part of it; for, if I may judge from my own experiments, there has never been a judicial inquiry in which so minute a quantity of arsenic has been so unequivocally discovered.

In my own analysis, I first formed a decoction of the contents and of the stomach separately, and subjected each, after acidulation with acetic acid, to sulphuretted hydrogen gas: a lemon-yellow milkiness ensued, which, on boiling, gave place to a lemon-yellow flocculent precipitate, with brilliant brass-yellow scales intermingled. This, when collected from both fluids, and dried and reduced in a small tube, gave an arsenical crust with all its properties fully developed; and the crust was converted, by repeated sublimation, into little octahedral crystals of oxide of arsenic, which I estimated as amounting to about a fortieth part of a grain.

As the decoction of the stomach still retained its yellow colour, I evaporated it, and procured a yellow precipitate in broad flakes. Knowing from experience that there was too much animal matter present in this precipitate to admit of the process of reduction being applied directly, I subjected it to a farther process, in order to destroy the animal matter. The impure sulphuret was acted on by nitric acid with the aid of heat, and consequently oxidated; the acids were then neutralised with potass, and the solution evaporated to dryness; the mass was then deflagrated in a glass tube, which process takes place gently, with effervescence and without burning, if the proportion of the nitre is not too small; the product was then dissolved out, exactly neutralised with nitric acid, filtered, a small portion tested with nitrate of silver, which gave a brick-red precipitate, and the remainder treated with a solution of nitrate of lead as long as any precipitation took place. The precipitate, which, besides other salts, contained arseniate of lead, gave a remarkably characteristic crust when mixed with freshly ignited charcoal and heated in a tube strongly with the blowpipe; and the crust subsequently gave octaëdral crystals when repeatedly sublimed.* The quantity of oxide procured by this process was not sensibly greater than by the former.

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* Edinb. Med. and Surg. Journal, for July 1824; and Edinb. Medico-Chir. Trans. vol. i.

The prisoner was convicted of poisoning her sister. Many persons entertained doubts of the sufficiency of the moral evidence, and some attempts were made to procure her pardon on the ground of its inadequacy. She was executed, however, and died protesting her innocence.—(See a paper by Dr. **Christison**, in the *Edinburgh Med. and Surg. Journal.*)

Spots of Blood.—M. **Adelon** lately read an Essay of M. **Raspail** to the Academy of Medicine in Paris, upon the chemical and microscopic phenomena, by which the presence of blood upon linen cloth and instruments of iron may be detected. The author assures us that he has met with all the characters given by MM. **Lassaigne** and **Orfila**, especially the last, by submitting linen rags dipped, not in blood, but in a mixture of white of egg and infusion of madder, to the tests they have indicated. He considers it probable that the spots made upon linen by the greater number of red fruits, in which albumen is found mixed with a colouring principle, would afford the same results: he thence concludes that the chemical proofs at present given as the tests of the presence of blood, or of its colouring principle, have so little of certainty in them, that the medical man cannot presume to give any legal evidence concerning them. With regard to the microscopic characters, M. Raspail informs us, after numerous observations, 1st, that the globules vary in diameter according to the organs which supply the blood under examination, contrary to the general opinion, which considers their diameter as constant and invariable in every part of all individuals of the same species. 2dly. These globules are colourless, and ought not to be considered as composed of an exterior coloured covering, and of a central white nucleus. It is sufficient, in order to satisfy oneself of the fallacy of this opinion, to dilute the drop of blood to be examined in a greater quantity of water; the colouring matter is then seen to spread itself upon the edges of the glass, and the globules remain of a white colour, undiminished in size. 3dly. These globules are, in fact, only albumen in a minute state of division: they are generally soluble in ammonia; are precipitated by acids; and are dissolved in small quantities after a considerable period in water.

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* I have since been in the custom of employing a different process for getting rid of the animal matter *before* the precipitation of the sulphuret; and in consequence the sulphuret, under all circumstances, is procured in a state fit for immediate reduction. This improvement I shall soon have an opportunity of making public.

Such are facts attending the examination of recent blood: as to that which is dried upon linen cloth, and afterwards soaked in water, the microscope shows nothing positively. In fine, microscopic observation does not offer, any more than chemical analysis, any certain means of ascertaining the presence of blood.

M. Orfila's answer to the above remarks is as follows: "My opinion corresponds with that of M. Raspail as to the microscopic characters, and I have said so in my essay. As to the chemical tests, I have long been acquainted with the experiments of M. Raspail; I have repeated them all; I declare that they are all wanting in exactness; and I request a commission to be appointed, of which I shall not be a member, which shall be directed to repeat these experiments, as well as those made by me, to decide between us."—The commission is appointed, and consists of MM. Mau, Adelon, Deleus, and two other members whose names are not mentioned.

PHARMACY.

Ergot of Rye.—In a Memoir on the Employment of Ergot of Rye, lately published by M. **Villeneumay**, he considers the best mode of giving the medicine to be in powder, in a dose of about twenty grains, and repeated at the end of half an hour or an hour, till its effects become apparent. He thinks wine the best vehicle for administering it, and, when wine disagrees, he recommends its being mixed with syrup of peppermint. The decoction of this substance has also been given as an enema, and with great effect. The power that this medicine has over the contractions of the uterus seems to point it out as useful when hemorrhagy succeeds delivery, and where a contraction of the uterus would put a stop to it. In such cases it has been tried, and with great advantage. (*Revue Med.*)

MIDWIFERY.

Laceration of the Uterus.—Mr. **Birch** makes the following interesting remarks, in the *Medico-Chirurgical Transactions.*

Laceration of the uterus proves fatal in one of three ways: either the woman dies very speedily from the disturbance of the vital functions immediately following the injury, and which no doubt is brought about by the intimate sympathy between the uterus and the brain; or death happens less speedily, but at an uncertain period, from the consequent inflammation of the uterus, peritoneum, and abdominal viscera; or, surmounting all these dangers, the woman eventually sinks from an incapacity of her natural powers to repair the injury sustained.

With all these difficulties and dangers in view, we could not have felt surprised if recovery had never taken place. Women, however, have sometimes survived when the laceration has been of the cervix of the uterus, of the vagina, or of both; but never, so far as I know, when the body or fundus of the womb has been implicated.

From comparing the result with the injury sustained in the two cases I have reported, a question arose in my mind, whether any satisfactory reason could be given why laceration of the anterior part of the cervix uteri and vagina should prove less fatal than laceration of their posterior part? That such is the fact, I satisfied my mind, by looking to all the records of successful cases I have been able to discover, and finding that in all the laceration was either to one side or to the front.

It appears to me that the intestines or bladder must of necessity come into contact with the wound when at the fore part, and do not only serve to prevent a further effusion of air or blood into the abdominal cavity, but perform a much more beneficial part, by throwing out coagulable lymph, receiving this natural glue poured out by the edges of the wound, in this way becoming adherent to them, and forming their temporary bond of union, until granulations have sprung up, contracted, and cicatrised, the whole of which process also this arrangement puts in the most favorable train. Whilst at the back, the rectum being too closely bound down to the sacrum, there is neither bladder nor intestine to close the wound, and hence its whole extent has to be filled up by granulations heaped upon granulations; and before nature is enabled to accomplish her task she sinks, exhausted by the constant source of irritation, or falls a sacrifice to an attack of inflammation consequent upon it. Whether this explanation will prove as satisfactory to the minds of others as it has done to my own, I am of course unable to divine: the fact however is, that lacerations of the posterior part of the vagina and cervix uteri have always proved fatal.

Recovery from laceration of the front or sides of the cervix uteri and vagina, has taken place under very different circumstances. It has happened when the child has not passed into the abdomen, but has been extracted from the uterus; and it has happened when the child has passed into the abdominal cavity,—when it has been allowed to remain there,—when it has been extracted through an opening made in the abdominal parietes,—and when it has been brought back through the laceration, and delivered "per vias naturales."

When the child has passed into the cavity of the abdomen, and has been allowed to remain there, it is not to be denied that women have lived, but their recovery has almost invariably been so imperfect, that they have for years dragged on an existence miserable to themselves and burthensome to their friends,—the children decaying, and being discharged by abscess slowly and painfully into the intestines, or, together with fæces, through the abdominal parietes; or their recovery has only been for a short time, at the end of which they have been attacked by inflammation, and died. Whilst, when the women have lived after delivery by turning or gastrotomy, the recovery has been perfect: so perfect, that they have in several cases subsequently borne children in safety.

The cases of recovery under any circumstances have been so rare, and so few of the unsuccessful ones have been recorded, that we cannot positively state gastrotomy has saved a greater proportion of lives than delivery by the natural passages; or that this latter method has been more successful than gastrotomy: but that one or the other method is to be preferred, according as it is practicable with less mechanical injury to the woman than the other, is a position to which all must assent.

From the foregoing facts I am of opinion the following principles are deducible:—

1. That delivery ought always to be accomplished, inasmuch as it certainly

does not lessen, but I believe increases, the chance of the woman's surviving if she lives it insures her a more perfect recovery; and moreover it affords the only, although confessedly remote, prospect of saving the child's life.

2. If the child remain in the uterus, it ought to be extracted by the forceps or lever, if possible; by the perforator, if these will not succeed; or by turning, if neither kind of instrument is applicable. The forceps are to be preferred, for a very obvious reason; and embryotomy is preferable to turning, because the pelvis being almost always small, this latter operation would often not succeed, and it would endanger or insure an increase of the mischief.

3. If the child have but partially escaped into the cavity of the abdomen, it ought to be brought back, if we can accomplish it without the greatest violence; and if this be not possible, it must then be taken through an opening in the abdominal parietes.

4. If the child have entirely escaped into the cavity of the abdomen, it should be brought back through the laceration, if practicable, without great force; which I believe will always be the case when the laceration is of the cervix or vagina, and when the operation is undertaken within any reasonable time from the period of the accident.

5. That where turning is not practicable, from the firm contraction of the uterus, or where it would endanger a great increase of the rent, there gastrotomy should be had recourse to, as affording the woman a better chance of living, a much better chance of perfect recovery, than a total abandonment of her to the "vis medicatrix naturæ," and as giving her child the sole chance of surviving.

6. That whatever is done should be done speedily, for these reasons: if the child have not already passed into the cavity of the abdomen, the probability is that it will very soon; if the child have passed into the cavity of the abdomen, the shorter time it is in contact with the viscera the less likelihood will there be of subsequent inflammation, and the less chance will there be of the uterus contracting firmly.

CHEMISTRY.

On a New Acid existing in Iceland Moss.—The reddish purple colour which is produced by adding a decoction of Iceland moss to per-salts of iron, has been attributed to the presence of gallic acid, but is found by M. PFAFF to be occasioned by a new acid body, which may be separated in the following manner:—A pound of the lichen, cut small, is to be macerated in solution of carbonate of potassa, until all that is soluble is separated: the above quantity will neutralise two drachms (about 120 grains) of the carbonate. The filtered liquor is to be precipitated by acetate of lead, and the brown precipitate produced, when well washed, is to be diffused through water, and sulphuretted hydrogen passed through it until all the lead is separated. The filtered liquor is acid, and, by spontaneous evaporation, yields dendritic crystals. The crystals, when heated, carbonise, but produce no odour like that of tartaric acid, and lime is left. If they be dissolved and acted upon by alkaline carbonates, carbonate of lime is thrown down, and alkaline salts, containing the new acid, are produced.

The potash salt crystallises in quadrilateral prisms, needles or plates, and is not deliquescent. The soda salt has similar characters, and the ammonia salt crystallises in needles. These salts abundantly precipitate the acetate and muriate of iron of a red brown colour; they precipitate sulphate and nitrate of zinc white; muriate of manganese slightly of a clear brown colour; barytic and strontian salts abundantly white: being mixed with strong solutions of muriate or acetate of lime, they gradually produce an acicular crystalline white precipitate; acetate of silver yields an abundant white precipitate, which does not change colour in less than twenty-four hours; they do not precipitate salts of glucina, magnesia, alumine, uranium, nickel, copper, cobalt, gold, or platina. This substance has been named the Lichenic Acid, and is distinguished from the boletic acid by the different character of its vapour, and by forming an insoluble salt with baryta.—(*Bull. Univ.*)

MISCELLANEOUS.

Midwifery in different Countries.—"According to the account given me by many different persons, unnatural labours are not by any means uncommon, and many women lose their lives in consequence of them; far more instances of the kind occur here than is usual in warm climates. The women are extremely fruitful; it is not unusual to find families of fifteen or twenty children." (LANGSDORFF, vol. i. p. 69.)

The women here always sit in the eastern fashion; but this cannot be the cause, for the greater part of the world do the same, and in countries where parturition is easiest.

"The measles had been very prevalent and very fatal among the Indian women. Almost all the Indian women who caught the measles while they were pregnant, miscarried. Childbirth seems remarkably easy here among the Spanish women. Madame Arguello told me that since she had been in the country, which was a considerable time, she having herself had fifteen children there, she did not recollect having heard an instance of a Spanish woman dying in childbirth. There are no midwives; some female friend assists at the delivery. Many of the Indian women, on the contrary, die at this time, owing, as it should appear, to a very pernicious custom they have of putting some great weight upon the belly during the labour, under the idea of facilitating the delivery. Miscarriages, from the third to the seventh month, are by no means unfrequent among them." (ID. vol. ii. p. 210.)

These Indians, it should be remarked, are a very diminutive race, the men not being above five feet in height: a singular fact, the climate being good, and food in abundance.

"Among the Abissones (an equestrian tribe), the women ride like men, and are said, for that reason, to be subject to long, difficult, and dangerous parturition." (DOBREZHOFFER, vol. ii. p. 120.)

"Among the Spaniards of Paraguay and the Plata.—Comme il y a beaucoup de femmes qui accouchent toutes seules, et que toutes ne savent pas nouer le cordon ombilical, j'ai vu un assez grand nombre d'hommes et de femmes adultes, qui avaient un nombril long de quatre pouces, et qu'on aurait pris pour toute autre chose; ce nombril était mou et enflé." (AZARA, vol. ii. p. 301.)

In 1783, the town of Oppedo, in Naples, was destroyed by an earthquake.

"So remarkable were the effects of this earthquake on the human organs, that in the two following years the women either did not conceive, were prematurely delivered, or brought forth dead children; and of those that were born alive many immediately expired." (Stolberg's *Travels*, 8vo. edition, vol. iii. p. 330.)

"In Scylla, a very opposite effect was produced by this dreadful visitation of nature. Barren women, and those who had left off childbearing, again became fruitful. Some of the former had married, and had remained childless till they were nearer the age of fifty than forty." (*Ibid.* p. 337.)

"I have since been informed that the barren women of Messina, as well as some who had left off childbearing, became fruitful after the earthquake." (*Ibid.* p. 339.)

Stolberg guesses that earthquakes are connected with electrical phenomena; that the excess of electric influence produced the one effect at Oppido, where the shock was strongest, and, in less degree, the directly opposite consequence at the other places.

INTELLIGENCE.

MONTHLY REPORT OF PREVALENT DISEASES.

During the early part of the present month, the weather was so extremely mild as to leave us few of the diseases of winter. Latterly, however, the easterly winds and diminished temperature have produced abundance of more acute cases and inflammations about the chest; rheumatism and catarrhs have been very rife. The former has been particularly severe and obstinate, but has yielded sooner to large doses of calomel and opium than to any other remedies.

Among individual cases, the only one worth mentioning is that of a young woman who had swallowed about half an ounce of oxalic acid a fortnight previously. Free vomiting was excited soon after the poison had been taken, but pain at the pit of the stomach continued more or less constant. At the time of her application to us, there was pretty general tenderness of the abdomen, with a frequent, small, but not hard pulse; and the bowels were much confined. She has done well under the employment of small bleedings, local and general, and frequent doses of castor oil.

Bye-Laws of the College of Physicians relative to the Licentiates.

DE PERMISSIS.

1. Statuimus et ordinamus ut nemo in Permissorum numerum eligendus proponatur, qui non annum ætatis suæ vicesimum sextum se clausisse Præsidentem et Censores, in Comitiis Minoribus,* certiores fecerit, et qui non gradum Doctoris in Medicinâ susceperit, et, antequam illum gradum susceperit, per duos annos integros in aliquâ Academiâ animo medicinæ studendi

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* Comitia Minora dicuntur, quæ habentur à Præsidente et Censoribus, cum aliàs, quoties ipsis visum fuerit, tum primo die Veneris, singulis mensibus, quo die Examinationes institui solent in ædibus Collegii. Comitia Majora a sociis universis celebrantur.

commoratus fuerit, et commorationis istius literas testimoniales in illâ Academiâ usitatas Comitiis Minoribus exhibuerit.

2. Nemo in Permissorum numerum admittatur qui medicamentum quodvis arcanum (*nostrum* vulgò dictum) in morbis curandis usurpare solitus fuerit; nisi ante examinationem primam id medicamentum, ac ejusdem adhibendi modum, Præsidenti aut Propræsidenti et Censoribus plane exposuerit.

3. Antequàm quispiam in Permissorum numerum admittatur, si fortè Chirurgorum aut Pharmacopolarum sodalitio olim donatus fuerit, sodalitii istius privilegiis omnibus renunciet, nec non emancipationis suæ literas firmâ auctoritate comprobatas Registrario proferat.

4. Nemo in Permissorum numerum admittatur qui non prius examinatus et approbatus fuerit, in tribus Comitiis minoribus, secundum hanc formam:—

Unusquisque eorum qui in numerum Permissorum admitti petat, examinetur:—

In Primis Comitiis, in parte Medicinæ Physiologicâ.

In Secundis, in parte Pathologicâ.

In Tertiis, in parte Therapeuticâ.

Præterea in singulis Examinationibus, locum è Celso, vel è Sydenhami operibus, Anglicè reddat. Singulæ Examinationes prædictæ Latinè fiant.

5. Qui ad hanc formam in Comitiis minoribus examinatus et in singulis examinationibus approbatus fuerit, in Comitiis majoribus proximè insequentibus proponatur in Permissorum numerum admittendus, et si major pars Sociorum præsentium consenserit, quamprimum admittatur.

6. Si vero quispiam in unâ quâvis Examinationum prædictarum, minus peritus, nec ad Medicinæ facultatem in urbe Londino et intra septem milliaria in circuitu ejusdem exercendam idoneus existimatus fuerit, non nisi præterito integro anno ad Examinationem iterum admittatur.

7. Antequam quispiam in numerum Permissorum admittatur, det fidem infra-scriptam Præsidenti aut Propræsidenti, coram Sociis in majoribus Comitiis:—

"Dabis fidem te observaturum statuta Collegii, aut mulctas tibi contra facienti irrogandas promptè persoluturum, omniaque in Medicinâ faciendâ pro viribus facturum in honorem Collegii et Reipublicæ utilitatem."

8. Admittendus flexis genubus,* (*eodem modo quo Socii,*) manus invicem applicatas humiliter tradat in manus Præsidentis vel Propræsidentis, qui dicat:—

"Ego *A. B.* Præsidens, vel Propræsidens, hujus Collegii admitto te ad Medicinæ facultatem in urbe Londino et per septem milliaria in circuitu ejusdem exercendam quamdiu te bene gesseris, precorque tibi omnia fausta."

9. Si quis vero in urbe Londino, aut per septem milliaria in circuitu ejusdem, Medicinæ facultatem exercuerit, qui ad hoc per Præsidentis et Collegii literas sigillo nostro communi sigillatas non sit admissus; auctoritate Præsidentis et Censorum, si modo ipsis aut eorum majori parti ita visum fuerit, admoneatur per schedulam in manus traditam, vel in domo ejus relictam, ut medicinam exercere desinat, donec examinatus et approbatus fuerit, literis ad hoc datis sigillo Collegii munitis.

Qui monitum hoc neglexerit, legibus regni obnoxius erit.

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* Si quis religionis causâ genua flectere nolit, hoc prætermitti potest.

DE ELECTIONE EXTRAORDINARIA IN PERMISSOS ET IN SOCIOS.

1. Quandoquidem fieri potest, ut viri sint quidam egregii et in studiis medicis satis versati, qui non duos annos integros ante susceptum gradum Doctoris Medicinæ in aliquâ Academiâ commorati fuerint, ideoque per statutum nostrum de Permissis in numerum Permissorum admitti vetentur, statuimus et ordinamus ut non obstante statuto de Permissis, liceat Præsidenti pro suo arbitrio quotannis unum Medicinæ Doctorem, utpote ob morum integritatem et artis medicæ peritiam, in numerum Permissorum approbandum Censoribus proponere. Et si, Examinationibus tribus ordinariis pro Permissis institutis debitè peractis, approbatus fuerit, liceat Præsidenti illum in numerum Permissorum eligendum Collegio proponere, et si major pars Sociorum præsentium consenserit, in numerum Permissorum quamprimum admittatur.

2. Liceat etiam Præsidenti quotannis unum pro suo arbitrio è Permissis, qui decennium compleverit à tempore admissionis, utpote morum integritate, doctrinâ, et artis medicæ peritiâ insignem, in Socium proponere; et si major pars Sociorum præsentium consenserit, in Societatem nostram quamprimum admittatur.

3. Liceat porrò cuilibet Sociorum in Comitiis majoribus ordinariis, postridie divi Michaelis habendis, aliquem qui annos septem integros in numero Permissorum fuerit, annumque ætatis suæ tricesimum sextum clauserit, examinandum proponere, et si, Examinationibus ordinariis pro Candidatis institutis in tribus Comitiis majoribus ordinariis debitè peractis, approbatus fuerit, et major pars Sociorum præsentium consenserit, in Societatem nostram quamprimum commodè fieri potest, admittatur.

DE CONVERSATIONE MORALI ET STATUTIS PŒNALIBUS.

1. Nullus sive Socius, sive Candidatus, sive Permissus fuerit, Socium aut Candidatum aut Permissum ignorantiæ in arte suâ vel maleficii nomine, nisi coram judicibus legitimis accuset, aut coram quibusvis afficiat contumeliis. Si quem contrà fecisse Præsidenti et Censoribus aut eorum majori parti innotuerit, primâ vice solvat quatuor libras, secundâ vice duplicetur mulcta; quòd si tertio quis similiter deliquerit, et modo prædicto convictus fuerit, si quidem Socius aut Candidatus fuerit, expellatur è Societate nostrâ, vel è Candidatorum ordine; sin idem sit è Permissorum numero, solvat decem libras. Quam quidem decem librarum mulctam quotiescunque idem Permissus ejusdem delicti modo prædicto denuò convictus fuerit, ipsi irrogandam statuimus.

2. Nullus Socius, Candidatus, vel Permissus salutatione officiosâ, vel animi benevoli obtentu, opem medicam ultrò offerat, nedum subministret ægro cuilibet, quem Medici cujusvis, sive Socii, sive Candidati, sive Permissi, curæ commissum esse cognoverit, et ad quem non accersitus fuerit.

3. Si quis autem malitiæ hujusmodi convictus fuerit, præter ignominiæ notam quam isti (quantum in nobis est) inuri volumus, quadraginta solidos mulctetur à Presidente et Censoribus.

4. Si quis paciscatur cum Pharmacopolis de aliquâ pretii parte ex medicamentis præscribendis percipiendâ, si sit Socius aut Candidatus, et hujusce delicti à Præsidente et majore parte Sociorum in Comitiis majoribus sive ordinariis sive extraordinariis præsentium convictus fuerit, è Societate nostrâ, vel è Candidatorum ordine, expellatur.

5. Sin Permissus delicti hujusce à Præsidente et Censoribus, aut eorum majore parte, convictus fuerit, decem libras quotiescunque id admiserit, mulctetur.

6. Medicus quisque, sive Socius, sive Candidatus, sive Permissus fuerit, singulis suis schedulis, in quibus ægri curatio præscribitur, diem præscriptionis, ægri nomen, et sui denique nominis literas initiales adscribat; nisi causa intersit à Præsidente et Censoribus approbanda.

7. Si plures Medici curationis gratiâ convenerint, consultandum est summâ modestiâ, et non nisi semotis arbitris à re alienis. Nec quisquam præscribat, imò ne innuat quidem, quid agendum sit, corum ægro, aut adstantibus, priusquam junctis consiliis inter ipsos Medicos curandi methodus fuerit constituta, Sin autem Medici in diversas iverint sententias, ita ut in eandem medendi methodum consentire nequeant, summâ tamen prudentiâ et moderatione se gerant; eorumque dissentionem ita, ut tàm ægro quàm amicis ejus quàm minimum molestiæ pariat, ordinarius medicus ægro aut adstantibus significet.

8. Qui leges has consultandi non observaverit, et à Præsidente et Censoribus aut eorum majore parte convictus fuerit, quinque libras mulctetur.

9. Nullus denique Medicus, sive Socius, sive Candidatus, sive Permissus, consilium ineat de rebus Medico propriis, in civitate Londino et intrà septem milliaria in circuitu ejusdem nisi cum aliquo è Sociorum vel Candidatorum vel Permissorum numero, sub pœnâ quinque librarum quotiescunque hujusce delicti à Præsidente et Censoribus, aut eorum majore parte convictus fuerit.

10. Omnes mulctæ quæ per statuta nostra irrogatæ fuerint illico solvantur.

DE PERMISSIS EXTRA URBEM.

1. Nemo ad Medicinam extra urbem Londinum et septem milliaria in circuitu ejusdem exercendam admittatur, qui non annum ætatis suæ vicesimum sextum clauserit, et non in aliquâ Academiâ, aut in aliquo Nosocomio Londinensi per annum integrum, aut in Nosocomio Provinciali per biennium, animo Medicinæ studendi commoratus fuerit, et præterea Prælectiones Anatomicas et Medicas audierit; de quibus omnibus Præsidentem, vel Propræsidentem, fecerit certiorem.

2. Antequàm quispiam in numerum Permissorum extra urbem admittatur, si fortè Chirurgorum aut Pharmacopolarum sodalitio olim donatus fuerit, sodalitii istius privilegiis omnibus renunciet.

3. Nemo in numerum Permissorum extra urbem admittatur qui non priùs a Præsidente et tribus Electis examinatus et approbatus fuerit, quemadmodum legibus regni cautum est.

4. Examinatio Latinè fiat.

Imprimatur hic libellus, cui titulus "Quæ ad Permissos pertinent," &c.

Datum ex Ædibus Collegii in Comitiis Majoribus, Februarii Mensis 20mo, 1828.

HENRICUS HALFORD, *Præses.*

THOMAS TURNER, JACOBUS TATTERSALL, }
FRANCISCUS HAWKINS, JOHANNES CARR BADELEY, } *Censores.*

Copy of the last Report of the National Vaccine Establishment to the Secretary of State for the Home Department; presented pursuant to an Address of the House of Commons, bearing date the 13*th February*, 1828.

To the RIGHT HONOURABLE ROBERT PEEL, Secretary of State for the Home Department.

SIR,—We have the honour to inform you, that the result of the last year's experience is highly favorable to vaccination, and that we hear most satisfactorily, not only of its protective influence, but of its wider diffusion.

It is true that cases are reported to us very often of the occurrence of small-pox after vaccination; but we have reason to believe that the number of those who fall into this safe, though sometimes severe, disease after vaccination, is not greater than that of those who formerly *died* by inoculation, whilst that practice prevailed.

With regard to the diffusion of this protection, whether we judge by the extent of the demand which has been made upon the Board for authentic lymph in the course of the last year, or collect from accounts received of the practice of vaccination in new countries, we are satisfied that the prejudices against it are less pertinacious than they were: and, where it is not resorted to with that alacrity and thankfulness which such a blessing might justly demand, the failure is rather to be attributed to a propensity in human nature to disregard danger at a distance, and to wait till the evil be at the door, before measures are taken to prevent it, than to a distrust of its saving influence.

In proof of its wider diffusion, we learn that it is now practised, not only throughout the Morea and the countries inhabited by the Greeks, but that it has been admitted into Constantinople, and into the palace of the Sultan, in spite of the prejudices which the religion of the Mahomedans opposes to any measure intended to interfere with the destinies of life. So that the advantages which this country derived from the East in the last century, by the acquisition of inoculation from thence, it has now abundantly requited by imparting to the same region the safer practice of vaccination, by which the small-pox, equal to their own plague in the severity of its visitations, has been already disarmed of its terrors, and in the course of years may, possibly, be extinguished altogether. We have, &c.

HENRY HALFORD, *President of Roy. Coll. Physicians.*
THOMAS TURNER, } *Censors of the Royal College of*
JAMES TATTERSALL, } *Physicians.*
HENRY PASTON COOPER,
President of the Royal College of Surgeons.
ANTHONY CARLISLE,
Vice-President of the Royal College of Surgeons.
CLEMENT HUE, M.D. *Registrar.*

National Vaccine Establishment, Percy-street;
13th February, 1828.

General Dispensary, Aldersgate-street.—A vacancy in the appointment of Surgeon to this Institution has occurred, by the resignation of Mr. Lloyd. The candidates for the situation are Mr. W. Coulson, of the Medical School, Aldersgate-street; and Mr. C. Caswall, house surgeon of St. Bartholomew's Hospital. The election is fixed for the 16th instant.

MONTHLY LIST OF MEDICAL BOOKS.

[*Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.*]

The Morbid Anatomy of the Brain. By Alexander Monro, M.D. F.R.S. & F.A.S.E. &c. &c. &c. Vol. I. Hydrocephalus. Illustrated by Copperplates.—8vo. pp. 200. London, 1828.

A Practical and Pathological Inquiry into the Sources and Effects of Derangements of the Digestive Organs, embracing Dejection, and some other Affections of the Mind. By Wm. Cooke, Esq.—8vo. pp. 290. London, 1828.

A Lecture upon Typhus Fever, as lately delivered at the Sunderland Infirmary. By Wm. Reid Clanny, m.d. f.r.s.e. m.r.i.a.—4to. pp. 28.

A General View of the present State of Lunatics and Lunatic Asylums in Great Britain and Ireland, and in some other Kingdoms. By Sir Andrew Halliday, m.d. & k.h.—8vo. pp. 101. London, 1828.

Practical Observations on Insanity and the Treatment of the Insane; also Hints on the Propriety of making the Study of Mental Disorders a necessary adjunct to Medical Education —8vo. pp. 127. London, 1828.

A Disquisition on the Nature and Properties of Living Animals. By George Warren, Surgeon.—8vo. pp. 144. London, 1828.

Observations on Cow-Pox, and on the Necessity of adopting Legislative Measures for enforcing Vaccination. By H. Edmondston, a.m.—8vo. pp. 156.

An Essay on the Diseases of the Jaws, and their Treatment. With two Plates. By Leonard Koecker, Surgeon Dentist.—8vo. pp. 95. 1828.

Cases illustrative of the immediate Effects of Acupuncturation, in Rheumatism, Lumbago, Sciatica, &c. By J. M. Churchill, f.l.s. 8vo. pp. 101.

Oratio Harveiana Secunda. A Roberto Bree, m.d.—4to. pp. 28.

Proceedings at the Ninth Anniversary Meeting of the Hunterian Society, February 6th, 1828. With the Report, and List of Officers and Members.

METEOROLOGICAL JOURNAL,

From February 20th, to March 20th, 1828.

By Messrs. Harris and Co. Mathematical Instrument Makers, 50, High Holborn.

February	Rain gauge.	Moon.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 A.M.	MAX.	MIN.	9 A.M.	10P.M.	9A.M.	10P.M.	9 A.M.	10P.M.	9 *a.m.*	2 *p.m.*	10 *p.m.*
20			48	49	40	29.09	29.06	99	98	SE	S	Cloudy	Fine	Rain
21			42	46	39	28.94	28.93	99	98	SE	ESE	—	—	Cloudy
22		☽	43	47	41	28.90	29.01	98	98	SE	ESE	—	Rain	—
23			41	42	39	29 20	29.42	98	98	NE	N	Rain	Fair	—
24			42	50	39	29.68	29.71	97	96	WSW	WSW	Fair	Fine	Fair
25			44	52	48	29.74	29.73	96	98	WSW	WSW	—	Rain	—
26			50	57	50	29.74	29.77	98	98	WSW	WSW	—	Fair	—
27			52	58	49	29.99	30.09	94	98	SW	S	Cloudy	Cloudy	—
28			50	55	40	30.20	30.21	97	96	NE	NE	—	Fair	Cloudy
29			42	47	41	30.12	29.93	98	98	NW	ENE	Fair	—	—
Mar.														
1		○	46	48	45	30.03	29.94	94	97	N	N	—	—	Fair
2			45	50	38	29.94	29.97	96	98	ENE	NE	—	—	—
3			42	48	42	29.88	29.76	95	92	WNW	N	Cloudy	—	Cloudy
4			43	50	40	29.84	29.63	92	93	NW	N	Fair	—	Cloudy
5			42	45	30	29.63	29.65	90	84	NNE	N	Cloudy	Sleet	Fine
6			35	40	31	29.65	29.92	76	90	N	N	Fair	Fair	Cloudy
7			33	38	31	30.11	30.03	80	98	NW	W	—	—	Rain
8			46	55	47	30.00	30.12	98	96	NW	W	—	—	Cloudy
9		☾	48	57	45	30.13	30.10	94	90	W	W	—	Fine	Fine
10			53	58	44	30.10	30.11	90	92	WNW	NW	—	—	—
11			52	55	46	30.11	30.12	92	92	W	WSW	—	—	Fair
12			48	55	43	29.95	29.95	94	98	WSW	WNW	Cloudy	—	Cloudy
13			52	60	52	30.01	30.04	93	96	W	WNW	Fine	—	—
14			54	59	46	30.14	30.15	88	86	W	WNW	—	—	—
15		●	50	62	49	30.26	30.25	86	80	N	NW	Cloudy	—	—
16			55	62	52	30.22	30.16	92	99	W	WNW	—	Fair	Sleet
17			57	64	48	30.04	30.04	92	94	W	NW	—	—	Fair
18	.15		51	56	48	30.06	29.55	94	96	NW	WNW	—	—	Sleet
19			49	52	42	29.35	29.47	98	94	W	WNW	—	Cloudy	Fine

NOTICES.

Communications have been received from Dr. Bow, E. G. B., Dr. Long, Mr. Humpage, *and* Mr. Maclean.

We shall be happy to hear from Dr. Long *again.*

ERRATA.

P. 185, 4th line from bottom, for *found* read *formed*.
— 191, 22d ditto ditto, after *cathartic* read *to*.
— 192, 8th ditto from top, after *nervous* read *influence*.

THE LONDON
Medical and Physical Journal.

Nº 351, VOL. LIX.] MAY, 1828. [Nº 23, *New Series.*

> For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL PAPERS,
AND
CASES OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER AUTHENTIC SOURCES.

EXTRA-UTERINE FŒTATION.

A Case of Extra-Uterine Fœtation. By — TILT, Esq.

SOPHIA LICKISH, æt. thirty-seven, was twice married; bore four children to her first husband, and, six years after her second marriage, again became pregnant. During her former pregnancies nothing unusual occurred, and her confinements were reported to have been short and easy; and nearly three months of the fifth had elapsed before any accident gave rise to untoward symptoms. While in the country, at the commencement of September 1827, she was exposed to unusual exertion in drawing water from a deep well, during which she felt as though something internal had given way; which was immediately followed by discharge of blood per vaginam, vomiting of bloody fluid, impaired appetite, and tenderness of abdomen. To these were shortly added retention of urine and constipation of bowels. Being no longer able to discharge the duties of her situation, she returned to her husband in town. Medical aid was now procured: her water drawn off with the catheter, and her bowels opened by medicine; which course of treatment was found necessary for a considerable time, when, the symptoms somewhat lessening in violence, fewer purgatives were required, and pressure above the pubes was found sufficient to empty the bladder.

Upon the 28th of January, 1828, I first saw. She was in bed, to which she had been constantly confined since the accident. She was much emaciated, her general health very bad, and her strength nearly exhausted by frequent vomiting, a copious fetid discharge from the vagina, and incessant abdominal pain, which she compared to lingering labour-pains. She now considered herself more than seven months gone, and was unusually large. Although the symptoms which existed, when conjoined to the history of her case and her present appearance, left little doubt in my mind as to its real nature, yet, anxious to neglect nothing which might assist my diagnosis, I requested an examination, which was readily granted; but nothing could be satisfactorily ascertained. The os tincæ could be nowhere felt; no part of the child was recognisable; and a tumor of considerable size lay pressing against the sacrum. Two medical friends (Dr. H. **Davies** and Mr. **Clark**, 57, Lamb's Conduit-street,) were also allowed to examine her, but nothing more was elicited. These circumstances, viewed in connexion with the symptoms above mentioned, led us to conclude that the child was extra-uterine, and likewise to suspect retroversion of the uterus.

By the administration of small opiates, the irritability of her stomach was diminished, the intestines were kept open with castor oil, and her health gradually improved under a soothing plan of treatment.

Up to the 10th of February, nothing occurred of any importance; but, on the morning of that day, without any apparent cause, the vomiting returned; pressure above the pubes relieved the bladder with difficulty; her countenance became much altered; and the motions of the child, of which she had been sensible for the last three months, together with the vaginal discharge, now ceased.

At the suggestion of Dr. H. Davies, the opiate was conjoined with chalk mixture; and a blister was applied to the epigastrium, on account of the irritability of the stomach, which had again returned. Although the blister did not rise well, and the draught was rejected, she felt relieved. On the day following, effervescing draughts, occasionally administered, with opium and capsicum, kept the stomach quiet, and procured some rest at night. Her bowels acted freely this evening without medicine, and the next morning her urine flowed, for the first time, without pressure over the pubes. Notwithstanding, however, these slight signs of improvement, she continued gradually to sink until the 14th, when she died.

An inspection of the body being a great desideratum, the friends were consulted, and permission was accordingly obtained. Dr. H. Davies and Dr. Dill were present at the examination, in which I was assisted by Mr. Bell, a friend of the former gentleman.

Post-mortem appearances.—The skin was universally jaundiced; the feet slightly œdematous; the abdomen very much, but irregularly, enlarged, being considerably fuller on the left side; the mammæ were flaccid and contained milk; and the external parts of generation were as tumid as in natural cases of labour. By moving the hand carefully over the surface of the abdomen, the head of the child could be distinctly felt, lying a little above and to the left of the umbilicus, and one of its extremities (whether hand or foot could not be satisfactorily determined,) was easily recognised resting above and to the right of the head. By tapping the surface over these two points with the finger, fluctuation was very palpable; and the tenuity of the intervening integuments, apart from the position of the fœtus and other corroborating symptoms, rendered the nature of the case completely evident. The arch of the colon was distinctly traced running across the epigastrium, immediately above the fœtal mass, and the abdominal covering was, by its pressure outward, moulded into a form somewhat similar to itself.

Upon making a longitudinal incision through the parietes of the abdomen, it was found that a large quantity of fluid lay in the peritoneal sac, and that the dissection could not be prosecuted with the necessary precision until it was removed. An opening was, therefore, made in the lowest part of the right lumbar region, through which much bloody fluid escaped, and the remainder was extracted from above by a sponge, the whole amounting to four or five pints.

A transverse incision was now made, and the flaps everted with considerable difficulty, as the peritoneum was glued somewhat closely to that portion of the membranes lying over the child's head.* The contents of the abdominal and pelvic viscera being now fairly exposed, a tolerably minute inspection furnished us with the following detail:

The peritoneum was highly inflamed, very dark, and considerably thickened. The small intestines were pushed up into the bosom of the diaphragm, and the omentum, which was wasted to a mere shred, lay reflected over the stomach. The liver was usual in size, but its peritoneal envelope, in common with that of the other viscera, was as much changed in texture as in aspect: nothing morbid, however, could be discovered in its internal structure, and the gall-bladder and biliary ducts appeared natural.

The uterus was seen lying obliquely across the pelvis, with its fundus in the right lumbar region, and its os tincæ rather above, and to the left of the symphisis pubis. Its size was above that of its ungravid state: it felt tolerably firm, and was externally very dark coloured. Between it and the intestines, principally in the umbilical and left lumbar regions, lay the fœtus involved in its membranes; the placenta being exterior to, and betwixt them and the arch of the colon. A fillet of fibro-ligamentous substance, about an inch and half in width, ran down from the inferior surface of the arch of the colon over the membranes, and was inserted into the superior edge of the left ligamentum latum. This band being divided and turned aside, the subjacent membranes were carefully opened, and the fœtus exposed to view. It was smaller than the average of full-timed children, but must at least have been eight months old. It lay upon its left side, with its lower extremities stretched over the sacral promontory into the posterior pelvic cavity; and its head, which was somewhat reclined, resting upon its left arm. Its face thus looked towards the diaphragm, and its chest was presented to the left side. The left side of its head and face was flattened, in consequence of pressure upon the arm, but, excepting this accidental deformity, it seemed perfect and well-shaped. As the motions of the fœtus had not been perceived for five days previous to the woman's dissolution, it was believed that the child had been so long dead; but, from abrasion of the cuticle and other signs of decomposition, it is likely that this event happened earlier than was suspected. There was no more than two or three ounces* of fluid in the membranes, which was of a very dark colour, apparently from admixture of blood. The chorion and amnion were perfectly natural, differing in nothing from those formed in the uterine cavity; and exterior to these lay the sac,† or ventral uterus, within which the fœtal mass, excepting the placenta, was contained. The walls of this sac were about three lines thick, of considerable strength, perfectly smooth internally, and tenaciously adhering to the neighbouring parts. It was attached to both the broad ligaments, descended along the posterior surface of the uterus in company with the subjacent peritoneum, was reflected over the sacral promontory, adhered in its ascent to the sigmoid flexure of the colon on the one side, and to the psoas muscles on the other, rose upon the lumbar vertebræ, swept over the internal surface of the placenta, and, turning a little above the umbilicus, ran down over the membranes to the ligamenta lata. It was nowhere connected with the chorion, and yet no space intervened between them. Above it, and considerably to the left side, lay the fillet before described.

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* I think it is more than probable that, had the woman survived much longer, the abdominal integuments would have suppurated at this point, allowing the child to escape in detached pieces. See American Magazine for 1746, where a case is given in which several parts of a child came thus away, after remaining in the abdomen for several years, during which the woman bore six children: she, however, died. See likewise Journal de Med. Chir. &c. tom. xiv. page 443, for a case in which a complete skeleton was removed from the abdomen, through an aperture in the umbilical region formed by sloughing. The patient perfectly recovered, and ever after menstruated through this opening.

The placenta was of enormous size,‡ and very extensively attached. Its width was greater than usual, it was five inches in thickness, and could not have weighed less than five pounds. In structure it differed little from those met with in ordinary cases; perhaps, it was somewhat firmer. It adhered with great tenacity to the sac, excepting in the inferior part on the right side, where it was detached for a few inches, the intervening space being filled with coagulated blood.* Its supply of this fluid must have been very liberal, as its connexion with blood-vessels was very extensive. The right, and especially the left mesenteric and emulgent vessels seemed to be the main fountains from which nutriment was drawn for the fœtal system; but, besides these, there were many minor sources, since it adhered throughout to the inferior surface of the arch of the colon, a great part of the mesentery and meso-colon, to portions of the small intestines, and two or three of the superior lumbar vertebræ. It lay across the spine, but unequally, the greater part of it being on the left side; and the surface, by which it was connected with the mother, faced the diaphragm, from which it was separated by the intestines which had been forced up into the bosom of this muscle.

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* The average quantity of water contained in the amnion in ordinary cases is about two common pints.

† A case is recorded in the seventh volume of the New-York Medical Repository, page 221, where a sac of a very similar character was found, and the anterior portion of which, as in the present instance, adhered to the peritoneum lining the muscles of the abdomen.

‡ In cases of extra-uterine fœtation, the placenta is much thinner, and, although more extended than uterine placentæ, is considerably lighter and less bulky. I am not aware that there is any case recorded in which the placenta equalled the present, either in weight or size.

Nothing could be discovered amiss in the structure of the uterus, which was about the size of one in the fourth month of pregnancy.† Externally it was inflamed, and presented the same darkened appearance with the abdominal viscera. We have already stated that the sac adhered to its posterior surface, and, upon separating this membrane, for which considerable force was necessary, slight vascularity appeared behind and a little to the left of the right lateral ligament; but there was not a vestige of cicatrix, nor did any thing exist to sanction the idea of rupture of this organ. The os tincæ was dilated, and two fingers could be admitted with ease. The cervix appeared slightly vascular, but the internal surface of the fundus was pale and smooth. The right fallopian tube was pervious, of natural size, and complete; but there was no right ovarium to be perceived. The left ovarium was small, and contained several vesicles. The left fallopian tube was somewhat enlarged, and about the middle of its superior surface, near to the insertion of the fillet before mentioned, its coats were ulcerated for an inch and a half.‡ Upon either side of this opening it was pervious, and its calibre throughout larger than that of the right. The vagina was quite healthy.

Several questions of importance must suggest themselves to the mind on reading the above detail; and the first in interest undoubtedly is, how did the fœtus make its way into the abdominal cavity? Did the ovum remain in the ovarium, and did the ovarium, by gradually enlarging, constitute the sac in which the fœtal system was contained? Or did the ovum, in leaving the ovarium, fall into the abdomen; not being grasped by the fallopian tube? Or did the ovum, during its passage through the fallopian tube, escape into this cavity? Or, finally, did it reach the uterus, and, by retroversion of this organ, constitute one of those cases described by Dr. MERRIMAN?*

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* The hemorrhage which resulted from this partial detachment of the placenta had, no doubt, accelerated the death of this woman; and it was the blood, then, effused, that darkened the fluid which before lay in the peritoneum.

† It is generally found more or less enlarged in such cases.

‡ A case is detailed by Mr. TUCKER, in which the left fallopian tube was ruptured about the same part; and the death of the woman proceeded from partial detachment of the placenta.

It will be admitted, I presume, that the answer must be found in some one of these suppositions; and, although there are many circumstances of obscurity accompanying the history as well as the dissection of the case, and there may be arguments advanced in support of each, several reasons have induced me to conclude that it was through the left fallopian tube the ovum escaped into the abdomen.

We have no reason to believe that its escape was occasioned by the corpus fimbriatum neglecting to embrace it on its departure from the ovarium; and there exists no evidence to show that there ever was retroversion in this case. During the first six months of pregnancy, no examination per vaginam was made; and, although retention of urine and constipation of bowels are presumptive of this misplacement, yet these symptoms did not occur until the third month of pregnancy, when the fœtus, membranes, and placenta had evidently arrived at an unusual size, and, by their position behind the enlarging uterus, will satisfactorily account for their appearance. It is true that several medical gentlemen had examined her some weeks before her dissolution, and suspected retroversion; but the absence of the os tincæ, and the tumor that pressed upon the rectum, the only circumstances on which our diagnosis was founded, were otherwise explained by inspection after death, when the uterus was found in a position the reverse of that assumed in retroversion.†

The absence of the right ovarium was the only fact favorable to the supposition that this was a case of ovarium pregnancy; and, independent of the impossibility of determining whether or not it did ever exist, I think there are several circumstances tending to show that this solitary fact cannot be regarded as conclusive.‡ The fœtus lay almost entirely on the left side, and it was the right ovarium that was absent;—the adhesions of the sac, in which it was contained, were much more numerous on the left than on the right side;—the fillet which bound down the membranes was inserted into the left fallopian tube, near to the point of its ulceration, and lay entirely in the left side; and the greatest portion of the placenta was attached to viscera belonging to the left side. Besides, had this been an ovarian case, why did the woman pass the first three months of pregnancy in health and ease; and why did symptoms of disorder, when they did appear, come on instantly and with violence? Had the ovum never left the ovarium, the gradual increase of this latter organ would have prevented the sudden approach of constitutional derangement; and, although the disturbance occasioned might have been ultimately great, it would not have commenced with violence.

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* See his Dissertation on Retroversion.

† It is extremely difficult, perhaps impossible, in some such cases, to determine when retroversion exists, and not a few have experienced the same difficulty with ourselves. See Medical Commentaries, vol. xx. page 254; London Medical Journal, vol. v. page 96; Medical and Physical Journal, vol. xi. page 293; Transactions of a Society, &c. vol. ii. page 287.

‡ Ovarian cases are not very common, and it seldom happens that the ovary reaches a large size. "It either bursts early, or inflammation and

We are, therefore, inclined to believe that the ovum escaped, during its passage through the left fallopian tube, into the abdominal cavity, and was gradually invested with membranes and a false uterus. Could it be shown that the right ovarium had never existed in this woman, this view of her case would be demonstrably true, seeing that the ovum must have been impregnated in the left ovarium, and that the left fallopian tube was found ruptured. But, as we have nothing beyond presumptive evidence that such was the case, although highly probable, it cannot be considered certain.

The position of the child, and the strong and numerous adhesions of the sac in the left side,—the easy and natural course of her pregnancy for the first three months,—the sudden supervention of untoward symptoms,—the feeling of something having given way internally while using violent exertion, instantly followed by derangement of the whole system, and a bloody discharge per vaginam,—the continuance of this derangement, with increasing violence, from this period to that of her decease,—the fact that the ovum does not leave the ovarium until six weeks or two months after impregnation, and the near correspondence of this period with that which elapsed prior to the accident,—the ruptured condition of the left fallopian tube, and the formation of the fillet at the margin of the rupture,—the appearance of the sac being that of a false membrane, and not of a bag covered with the peritoneum,—the presence of the greatest part of the placenta in the left side, and the absence of the right ovarium;

abscess take place, or the fœtus dies and is converted into a confused mass, or it excites dropsy of the ovarium." (BURN's *Midwifery*, page 193.)

are the principal circumstances by which we have been influenced in forming our opinion. Whether the ovum lodged for some time in the tube before the accident, or had merely proceeded so far through it when the accident occurred, are circumstances difficult to determine. Perhaps, the larger cavity of the left tube, and the slight difference[*] which existed between the period that elapsed from the commencement of pregnancy until the injury was sustained, and that generally occupied before the ovum leaves the ovarium for the uterus, are circumstances favorable to the first supposition, yet cannot be deemed sufficient to establish the point.

That there would have been some discharge of blood after the accident might have been expected, but that this discharge should have been continued unto the period of the child's death, when it ceased, appears strange and inexplicable. Was this the menstrual fluid,[†] or some morbid accidental discharge? If the former, the ordinary course of nature in such cases was reversed; for, during the life and growth of the child the menses are discontinued, but return after its decease; and, if it were a morbid product, where was its source? Was it secreted by the vagina, or did it come from the uterus? or could it possibly have drained from the abdomen through the ruptured tube, as a part of that fluid, some of which was taken out of it after death? The internal surface of the uterus and vagina, excepting a small portion of the cervix of the former, was pale, and betrayed no symptoms of having given rise to any such secretion, and the external characters of both these fluids were very similar; but, admitting that they were the same, we are furnished with no reason why the discharge was discontinued upon the death of the child, and, moreover, it is very doubtful whether fluid existed in the abdomen during all the time which elapsed from the occurrence of the accident.[‡]

Indeed, the entire case is so perplexing and obscure, that almost every part of it may be considered a subject for discussion and difference of sentiment; and, acting under this conviction, while for reasons adduced we have defended the views now given, all the minutiæ of the case are laid before the reader, that he may have materials from which to draw his own conclusions.

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[*] Although the period above specified is the average time spent by the ovum in the ovarium, yet it may certainly remain longer; but, supposing that two months of pregnancy had passed before its departure, a few days only would be the difference between that period and that which elapsed between conception and the date of the accident, which occurred some time during the third month.

[†] Cases are upon record in which the menses flowed for several months during pregnancy. (Vide BURNS, page 187.)

[‡] From the inflamed condition of the peritoneum in this case, it is probable that the greater part of the fluid found in the abdomen after death was the effect of peritonitis; and it is not to be conceived that such a disease could have existed long prior to the decease of the woman.

FEVER.

Observations on Fever. Addressed to a Medical Friend, by Dr. Bow, of Alnwick.

(Continued from p. 300.)

In some work or other I have read as the opinion of its author, that the animal system was possessed of one dose of vitality, which could not become superabundant in one part without a proportionate deficiency in some other part, and vice versa. Such a law, I suspect, obtains with nervous influence. If there be too great a determination of it to one particular point or surface, it will be proportionally withheld from other parts ; and if we diminish the sensibility of a part, so that usual impressions are not recognised, the usual force of influence is not transmitted to such part, and consequently it is transmitted to some other part or parts in greater force. If to the healthy subject we administer a brisk cathartic, we by it cause a determination of nervous influence greater than natural to the gut; therefore, during the operation of the medicine, there will be felt a greater or less degree of muscular debility and of coldness of the surface, feelings plainly arising from deficiency of nervous influence, owing to the demand for it elsewhere. Although the *general* action induced by a cathartic be sedative, the cathartic itself is a stimulant, and directly acts as such. On the other hand, if we administer a moderate dose of opium, we thereby diminish the sensibility of the stomach, and consequently the usual force of nervous influence is not elicited; it is, therefore, transmitted elsewhere in greater force, giving rise to hilarity of mind, increase in the force and frequency of the pulse, increased warmth of the surface, with moisture of the skin; yet, though these symptoms be demonstrative of excitation, they are not the immediate effects of the opiate. Opium is a direct sedative, acting upon the nervous extremities, producing a kind of torpor of them, by which they are more or less unfitted as instruments of transmission of impression to, or of influence from, the nervous centres. If the dose of opium be increased, there is torpor communicated to the brain itself, by which it becomes unconscious of all impressions, and sleep is the result. If opium act by diminishing the sensibility of the surface to which it is applied when administered internally, and if, in consequence of this effect, there be a greater determination of nervous influence to the surface of the body, we ought reasonably to expect that its external application would, by diminishing the sensibility of the skin, cause a greater determination of nervous influence to internal organs; and this we find to be the case. In debilitated habits, I invariably find that opium applied externally acts as a laxative, and I am not only in the habit of so applying it with the view of moving the bowels, but also of improving the appetite; effects very different, indeed, from those resulting from its internal administration.

If a patient labouring under typhous fever be left to himself, or if the treatment during the first stage, and three first days of the second stage, be inertly conducted, and if nature do not assist him by some critical discharge, then is he in danger of ulceration of the mucous and muscular coats of the intestines; a circumstance which happens so frequently, at least on the continent, as to have given rise to the celebrated though delusive doctrine of Broussais. I have said that nervous energy generally begins to decline on or after the third day of the second stage, after which time, if the irritation on the surface of the body continue, nervous influence will still continue to flow to the skin, though actually not in such great force as on the preceding days of the same stage, yet in greater force in proportion to that transmitted to other parts; for we find that, the weaker the patient, the more easily is the stream of nervous influence directed to or from any particular surface. Therefore, the irritation of the surface continuing, and as now nervous influence is more easily diverted, internal organs are in a greater degree deprived of it. And that the mucous membrane of the intestines should be the part to suffer in consequence of the diminished supply, is just what might have been expected from the distribution of the branches of the sympathetic nerves; for, although these nerves send branches to every part of the body, their principal expenditure is on these two extensive secreting surfaces, the skin and mucous membrane of the bowels: hence an agent acting on the one surface must necessarily induce a contrary action on the other. Indeed, either of these surfaces is so liable to be affected by causes operating on the other as to be a circumstance of daily observation. Nervous influence being then almost wholly diverted from the mucous surface of the intestines, infarction of its follicles, venous congestions, ulcerations, and gangrene follow. I have not been present at any dissection where the ulceration alluded to has been witnessed, nor have I seen a more accurate description of it than that by Dr. HEWETT, in the London Medical and Physical Journal for August and September, 1826; and I think whoever peruses the cases and observations there given will at once recognise disorganization from want of action rather than ulceration consequent to inflammation. As a proof that this want of action arises from the determination of nervous influence to the surface, owing to the superior sensibility of the skin, I may observe that such appearances may be found to follow a preternatural determination of influence to the surface, however caused; for unless upon this principle, it would be difficult to explain the appearances found by Dr. Hewett in the young woman who died in consequence of extensive burn. If this view of the subject be correct, the conclusion to be drawn from it is of the utmost importance in practice. With the view of turning the stream of nervous influence inwardly, I frequently employ opium externally during the second stage of fever, and from that I ever get what I expected, viz. an improved state of the stomach and in the appearance of the tongue; and as I must declare my astonishment at the rapid recoveries of some, may I not believe that, by determining nervous influence to the intestines, I have unwittingly accomplished a more essential point, that of arresting or preventing the ulcerative disorganization of the mucous coat of the intestine?

The perusal of Mr. WARD's communications to the first and some of the succeeding volumes of the London Medical and Physical Journal led me to the employment of opium externally in fevers, and I know not why the cases and facts stated by him have not urged the generality of practitioners to adopt the practice; unless, indeed, the supposed *modus operandi* of opium. For if opium acted only on the system after having gained the circulation, the effects following its exhibition would be the same in every instance. But, as this is not the case, there being a very sensible difference in the effects of its internal and external application, and as the mere mode of its introduction, whether by lymphatics, lacteals, or otherwise, is inadequate to explain the difference, perhaps this difference may be supposed, by those who favor the idea of absorption, to rest more on fancy than on truth.

In prolonged fevers, the low muttering delirium, the restlessness, and the denied sleep, are, I think, caused by the deficient secretion of the fluid destined to lubricate the meninges of the brain. If such be the case, we can readily discern why we may succeed in procuring quiet sleep by opium externally applied, when, internally administered, it might aggravate the symptoms we mean to remove. For, by applying opium to the skin, we diminish its sensibility, we produce a torpor of the extremities of the sentient nerves, by which a preternatural determination of nervous influence to the surface is prevented. This nervous influence being now determined inwards to parts much in need of it, the lubricating secretions become more copious, irritation is diminished, and sleep follows.

But it is not the secretions only which become more copious or more perfect in consequence of the morbid determination of nervous influence to the skin being put a stop to; for the patient awakes with an appetite for the food which before he loathed, proving that the gastric fluid hath become more copious or more perfect. The mahogany colour of his cheek is changed to a brighter red, proving that the change of the blood in the lungs hath become more perfect. His pulse, which was running towards an hundred and twenty, weak and irregular, is now regular and below an hundred, proving that the determination of nervous influence to the heart is now sufficient to regulate its action; although this difference in the action of the heart may, in some measure, proceed from the more perfect arterialization of the blood.

To understand why opium might aggravate the symptoms we intended it to remove, when given internally, I have only to refer you to what I have said of its *modus operandi* in the healthy subject. It determines nervous influence to the surface of the body. Now, the symptoms we wish to remove are owing, in a great measure, to a morbid determination of nervous influence to the surface. If by the greatness of the dose we succeed in procuring sleep, it is far from being quiet or sound, and the patient awakes unrefreshed: nay, it is proverbial that, in such cases, benefit seldom arises from sleep effected by opium. Insensibly have I been led to make the above and many other remarks not immediately hinging on my subject, yet, as I conceive they are not altogether out of place, I trust you may also be of that opinion.

I will now propose to you the following condensed hypothesis, which will at one glimpse give you my idea of the chain of actions which constitutes fever:

Impaired energy and functional disorder of the nervous system, and, in consequence, prostration of strength and imperfect secretion generally; irritation from the imperfect products of secretion, and, in consequence, increased nervous energy and sense of heat; absorption of the imperfect products, and, in consequence, inordinate vascular action.

The first link of the above, as you must remark, is also the first link of the Cullenian theory. I have employed the expression "nervous system" instead of brain, and perhaps such alteration was unnecessary; but of that more hereafter. I have added "functional disorder," because, by doing so, I think I meet one objection which has been started, viz. that diminished energy of the brain is not necessarily followed by fever. I can readily suppose that the energy of the brain may be impaired to a degree even greater than that necessary to produce fever, without fever being the result; but this impairment must be so gradual as at first to effect the secretions but triflingly, and then, instead of fever, we have, according to circumstances, a disease to be found in the class Cachexia. I regret I can go no further with CULLEN; for I think it is needless to call in the aid of an ideal power in the animal economy to perform indirectly that which we can conceive to be performed directly by a simple and natural process; a process which we often artificially imitate to effect the same end.

One of the functions of the nervous system being secretion, or rather (to make use of language which may not offend an anti-neurologist,) the brain having an influence over the secretory apparatus, I have noted as a consequence of impaired energy imperfect secretion generally; and, as I have already said, it is owing to the imperfect state of the secretions throughout the body that a hot stage follows the cold one. The irritation produced by these imperfect products is the cause of the reaction, and in the greater sensibility of the skin we have the reason why the reaction is first observable on the surface. If imperfect secretion generally be admitted as a consequence of impaired nervous energy, it follows that the imperfect products must not only irritate, as would foreign matter, the nervous extremities with which they come in contact, but also that they must be absorbed and enter the circulation likewise in the shape of foreign matter. And if these imperfect products be sufficient to irritate, and to produce inconvenience, as soon as they are separated from the blood, in the parts with which they come in contact, it is but reasonable to conclude that, when absorbed, they will excite, by irritation, the heart and arteries to increased action.

It is impossible for me to foresee all the objections you may start to the above hypothesis, for, as the father is frequently the only one who is blind not only to the moral, but even to the physical, defects of his child, so I, aware of my partiality, must look to you to point to its failings: it fails not, however, in simplicity, and it speaks neither of unmeaning sympathies, of morbid associations, nor of imagined *vires medicatrices naturæ*.

As I am one of those who believe that all fevers are produced by the same proximate cause, I meant here to show the adaptation of the above theory (if I may so name it) to some particular forms of fever; but, with a view of bringing this communication to an end, and upon the consideration that, if it explain the phenomena of the common continued fever of this country, it will be equally explanatory of the leading characters of all fevers, I will reserve what I have to say for some future epistle. Yet there is one form of fever which I cannot avoid adverting to in this place, inasmuch as it stands recorded to this day as an insuperable objection to the Cullenian theory; to the very stage which alone is correct, and which I have borrowed as the basis of my own. It is said that in symptomatic fever there are no symptoms of impaired energy of the brain. Be it so; and partly owing to that it is that I have said "nervous system" in my condensed view, instead of "brain," as written by Cullen. No acute inflammation can possibly happen in any part of the body, unless there be a preternatural determination of nervous influence to the part; consequently, there must be a deficiency of it in other parts of the body, and, owing to this deficiency, the secretions of such parts are imperfectly produced. These imperfect products at length irritate, are absorbed, and fever established. Thus, though this fever does not commence with symptoms of depression so marked as to constitute signs of impaired energy of the brain; yet I presume it will not be denied that there is disorder of the nervous system, consisting in impaired energy generally, the increased local determination being its remote cause. We have now a fever corresponding in its leading features to the stage of excitement in idiopathic fever. This fever is not of long continuance, for the absorbed offending matter, after a time, is determined to, and finds an outlet at, the wound or injured part, in the form of pus. The symptomatic fever I allude to is that which alone should be called so, viz. that which surgeons recognise as such.

The fevers said to be produced by the local affections called phlegmasiæ is, for the most part, if not always, an idiopathic fever. It is an inflammatory fever in which, owing to certain causes, an irregular distribution of nervous influence gives rise to topical inflammation. In the same way topical inflammation obtains in typhus, but here we never think of calling the fever symptomatic.

SPRAINS.

Memoir on Sprains. By M. A. Pelletier, Hospital Surgeon at Mans.

It is to be regretted that, while cases presenting any thing rare or peculiar are generally told with minuteness, little or no notice is taken of diseases that are apparently slight, but which, from their great frequency, ought to be well known, and have some proper rules of treatment laid down. This particularly applies to the subject we have chosen, as *sprains* are thought to be curable by any-body, and quacks employ, to cure them, means that are sometimes dangerous.

To be precise, we would define sprains to be the forcible extension of the white fibrous tissues in the vicinity of joints, and serving them as means of union, such as ligaments, capsular fibres, and tendons, which for the most part act as ligaments. The causes of sprain may be distinguished into direct or determining, and indirect or predisposing. The direct causes generally are all efforts supported by the articulations, either in the exercise of different professions or in the different accidents to which men are liable. As these efforts must separate the articular surfaces, so they must have the effect of stretching the ligaments more or less. Therefore, those joints most exposed to great efforts are the most likely to be sprained, particularly if these joints do not possess a certain laxity, capable of permitting considerable movements without much drag on their ligaments. The scapulo-humeral joint, in consequence of possessing this laxity, although partly exposed to such accidents, is rarely a subject of sprain: on the contrary, the tibio-tarsal, radio-capsule joints, &c., whose articulating surfaces are closely united, give the most frequent examples of sprains. The tibio-tarsal articulation is particularly so, and in itself presents more cases of sprain than all the other joints of the body. It can equally well be conceived that the ligaments in these articulations most exposed to support violent efforts are most liable to sprain. So M. P. remarks, that he has found that, out of ten sprains of the tibio-tarsal articulation, eight at least affect the external ligaments; the foot having more disposition to adduction than to abduction.—Among the indirect causes, some are relative to the mode of life or profession of individuals, others to constitution. In the first class may be placed the custom of taking violent exercise, the use of high-heeled shoes, pattens, &c.: in the second class we find considerable fatness in conjunction with a lymphatic temperament, the one increasing the weight of the body, and the other relaxing the ligaments; scrofula, &c.

The nature and character of Sprains.—It would at first appear that so simple an accident, particularly when there is no tearing of the ligament, could hardly cause any troublesome symptoms, but theory teaches, and experience every day shows, that fibrous tissues, which could be divided by a sharp instrument without pain, are never submitted to violent distention without causing much pain, and symptoms more or less severe; but the vital properties being naturally very obscure in these tissues, they cannot immediately be exalted, so that some days often will elapse between the distention and the development of the inflammation caused by it. And such is precisely the source of the imprudencies which patients commit, in continuing to exercise a limb after it has suffered a sprain. Suppose a violent extension to have been applied to the foot, the patient experiences at the moment a severe pain in the distended ligaments. This soon ceases, and he resumes his exercise, which he had for a moment interrupted. After some time, the vital properties develop themselves gradually in the distended ligaments, and inflammation shows itself; the pain becomes intolerable, and, if the subject is scrofulous, the consequences may be most serious. M. Pelletier thinks that, from neglect, a sprain becomes a greater evil and more difficult of cure than a fracture.

Diagnosis of Sprain.—An unfailing method of discovering sprain is to put the limb in the situation it was at the time of the accident, and gradually and carefully to bend the joint in the same way. For example, if an external sprain of the foot is suspected, to carry it gradually into adduction; soon pain begins, which disappears on moving the joint the opposite way.

Sprain should never be considered as a trivial accident. It often happens that what at first appears simple shows in a few days very urgent and distressing symptoms, when neglected or improperly treated. The greatest precautions are necessary, and it is better to err on the safe side by too much than too little care. To establish the basis of a regular treatment of disease, it is indispensable to be acquainted with the progress of the disorder, and to mark precisely its different periods: this is particularly applicable in sprain, since its treatment varies much in its different stages, and what would be serviceable at one stage may be most improper at another. Let us suppose a sprain entirely left to nature's efforts, and going on as far as it can, we can distinguish four periods: 1st, the forcible extension of the ligaments, with severe but generally evanescent pains; 2d, the development of acute inflammation in the parts injured; 3d, the change from acute to chronic inflammation; 4th, organic degeneration of the inflamed parts, and accidents attending it. After describing each of these periods, we shall point out the appropriate treatment.

First period—the forcible extension of the ligaments. This begins at the instant when the accident has happened, and lasts generally from twenty-four hours to two or three days. It results from several causes. It may be asserted that, in general, inflammation manifests itself so much the more quickly as the extension has been great, the subject lymphatic, young, and gifted with much vitality: on the contrary, so much the more slowly as the sprain has been slight, the subject aged, or of a constitution less irritable. When sprain takes place, there is acute pain in the distended ligaments: sometimes this pain disappears very quickly, and the person resumes the exercise he was about. Now this is the insidious part of it, and favors the development of further mischief, by preventing persons from taking that rest which is so essential to the cure. Soon after the extension there comes on a puffy swelling in the neighbourhood of the parts affected, a true active œdema, sometimes even ecchymosis, greater or less. These must not be considered as the result of inflammation, (which has not had time to develop itself yet,) but as the effect of a lymphatic afflux into the cellular tissue where the pain was felt. What proves this is, that the swelling gives only an œdematous feel, without heat or local pain on pressure, and which quickly disappears with rest. Surgeons, who have not sufficiently observed this complaint, are deceived by this disappearance of the swelling, which they regard as the principal symptom; and look upon the disease as terminated when this is dispersed, that is, on the second or third day. So that they give up all further treatment, and permit exercise at the very time when inflammatory symptoms are about to appear.

Second period—development of active inflammation in the distended ligaments. The tissues of the living animal economy, when subject to the influence of excitation, *cœteris paribus,* inflame with a rapidity corresponding to their supply of blood-vessels, and to the degree with which they are endued with well-developed vital properties. But this inflammation is not immediate: it is, in fact, rare that it manifests itself before twelve or twenty-four hours in tissues the most disposed to its invasion; and, in those less disposed to its influence, many days elapse before it appears. This is in conformity with what happens after grand operations, particularly amputations of limbs, when numerous and different tissues are divided. We must not, then, be astonished that inflammation of fibrous tissues, whose vital properties are so obscure, does not appear till a distant period from the time of the accident producing it. This circumstance, attention to which is of the greatest moment in the treatment of sprains, is then quite naturally explained by the mode of organization of the affected tissues. Generally, inflammatory symptoms manifest themselves from the second to the fourth day, and very frequently when the first pain is quite gone. If there is little swelling, the parts sprained have a natural appearance, and the patient, not understanding his situation, often refuses to keep at rest. Spirituous applications appear to do good by helping to dissipate the swelling during this treacherous calm; but soon the scene changes. The patient feels in the injured part pain, at first dull, then more severe, at last acute, preventing the possibility of moving the joint without anguish. Soon after, a shining appearance, heat and swelling, painful feeling of distention, throbbings and dartings in the part, come on; and few medical men will not now acknowledge the necessity of rest and antiphlogistic means; but scarcely are these first symptoms diminished when the patient gets tired of confinement, and wishes to resume his ordinary avocations; while the surgeon, thinking he has now only to forward resolution, instead of feeling that there is still inflammation to destroy, abandons too soon the antiphlogistic system, and passes to a resolutory treatment, thus recalling the inflammatory symptoms, and making them chronic. Here terminates the second period. We may easily imagine what must be the consequence of applying in this stage spirituous resolving embrocations, &c. We have seen from it the inflammation rapidly extend itself to the synovial membranes and neighbouring tissues, bringing on disorganization and suppuration of these tissues, caries of the bones, hectic fever, and death.

Third period—change from active to chronic inflammation. The affected joint becomes the seat of an habitual irritation, too weak, when attended to, to bring back inflammation in the acute form, but sufficient to make it pass into the chronic. This joint then becomes enlarged, and towards night is swollen, feels stiff: the patient, not aware of the mischief that may follow, continues his exercise, and the more willingly as he looks upon the play of the joint as absolutely necessary to its gaining strength. We have seen cases kept up this way for years.

Fourth period—" Degeneration Lardacée," lardaceous degeneration of the inflamed white tissues. The continuance of chronic inflammation of the affected ligaments, the cure of which is the work of years, is of itself troublesome enough, and yet this is by no means the most fatal consequence that may occur from neglected sprain. Often, indeed, the chronic inflammation kept up by exercise and other means extends itself by degrees to the cellular tissues, the synovial membranes, periosteum, and even to the bones themselves. This inflammation becomes more intense according as it attacks parts more vascular and nervous, causing pains which daily aggravate till they force the patient to keep his bed entirely; and the surgeon to have recourse again to antiphlogistic means. But it is too late; the return of the lancinating pains announce a lardaceous degeneration, which, once established, there is no escaping from. The joint loses its natural form, puffs up, becomes round, the skin covering it becomes semi-transparent, and of a milky white; a constant feeling of deep distention, and at times violent lancinating pains, torment the patient. Often abscesses in the synovial membranes under the periosteum, denudation and caries of the bones, with fistulous openings. The lancinating pains become almost constant, with sleeplessness, marasmus, hectic fever, night sweats, colliquative diarrhœa, and, if the part is not sacrificed to the preservation of the individual, death is not slow in bringing to a conclusion this deplorable scene. Such are the terminations of sprains, neglected or empirically treated.

We now proceed to the *treatment*.

There are few diseases against which have been devised more numerous, much varied, and sometimes more opposite modes of cure. Must we infer from this that the authors who have mentioned them have been deceived, or that the disease may be cured by methods essentially different. The most opposite means may, we doubt not, cure a sprain; but this truth, which astonishes the ignorant man because he cannot understand it, which makes him consider the curative art as merely conjectural, and depending for its results upon chance, explains itself quite naturally to the physician, who reasons and draws his curative means from the result of observation.

We have already distinguished four periods in the history of this complaint, and the explanations we have added must make it clear that, if each period called for certain means, these means ought to be different when applied at these different periods. It is precisely for want of this important distinction, and from having considered sprains as always alike, whatever stage they might be in, that the same confidence has been extended to cold applications and emollient poultices, to leeches and stimulating applications, to Goulard water and camphorated spirit, rest and exercise, &c.; and that, in consequence, a perfect chaos has arisen from the *ensemble* of these means of cure. What is still more to be lamented is, that the use of certain means at particular periods being supported by the sanction of celebrated men, ignorant quacks employ the same means in all cases without distinction, and in all the stages of the disease. It is easy to conceive what mischief may arise from such abuses. There is but one way to avoid these fatal errors, and to establish fixed rules for the treatment of this disease, viz. to review the four periods as they occur, and to point out successively the treatment suitable to each. If the surgeon is called to a patient in the first period, when there is considerable pain caused by violent extension, there are two points to be attended to. The first is to examine if there is rupture of any of the ligaments, which might be determined by estimating the force of the cause, the situation of the parts at the time of the accident, the continuance of pains, and the rapid swelling of the neighbouring parts. This last symptom is important to note: it renders the development of inflammation almost inevitable, whatever precautions are adopted, and therefore at once indicates the necessity of antiphlogistic means. The second thing to be attended to is to allay the pains and prevent the accession of inflammation; and, among the means of doing so, *rest* is the first: without this all others will fail; and, in conjunction with rest, we must make use of *revulsive* or *resolutory means*. These are usually looked upon to consist in certain external applications, which have the power of hastening back the circulating fluids into the great vessels, from whence they had been sent with so much increased energy as to distend the capillary vessels of the part affected. Without cavilling about this definition, we shall distinguish these means into three classes essentially different in their manner of acting: 1st, cooling resolvents; 2d, astringent resolvents; 3d, irritating resolvents.

Cooling resolvents.—In this class are all those applications which diminish the heat of the part, as snow, cold bath, &c. It has long been recommended to plunge the affected part into very cold water immediately after the accident. Now this we can imagine may sometimes prove serviceable, but in others may be most pernicious. To satisfy ourselves of this, let us analyse its manner of action. If the action of cold is sufficiently strong, but only temporary, it causes at first a numbing of the part, a sort of local asphyxia; all the organic energy appears to come to the aid of the part threatened with mortification, and by a reaction, the force of which is in proportion to the strength and age of the patient, strongly awakens the life of that part, pushes towards it with force a great quantity of blood; it becomes, in fact, a centre of irritation, sometimes of instantaneous inflammation. One has only to plunge the hand into snow or very cold water, and observe the effects, to be satisfied of this. This means, then, when employed only for a short time, by bringing on powerful reaction, acts as a very active excitant. Some authors, for this reason, place heat and cold on the same parallel, calling the first a direct, the second an indirect excitant, their results being similar. If the action of cold is energetic and long continued, the parts submitted to its influence are as it were paralysed, and this suspension of their vital properties may cause the extinction of their irritation. This is what happens in a part frost-bitten. After all these considerations, one may perceive that the immersion must be, *cæteris paribus*, prolonged as long as reaction is to be feared; longer, consequently, in a young than an old subject, in a vigorous than in a weakened state. If one might fix a general period during which immersion should be continued, we would say from eight to twelve hours. We have adopted for the employment of this means a method which appears to obviate the greater part of the inconveniences which may attend it. It consists in plunging the affected part into water, the temperature of which is only a few degrees below that of the skin, and gradually diminishing the temperature till the requisite cold is induced. By doing this we almost always avoid the inflammatory reaction, which might show itself after twelve or fifteen hours cooling. There are circumstances which ought to prevent this means being used, as, for instance, in women near the menstrual period, in persons subject to internal inflammations, and in all immediately after meals, as we have seen it, when this was not attended to, cause violent vomitings.

Astringent resolvents.—This includes those applications which, applied topically, cause a constriction of the parts, without any apparent inflammatory reaction, as Goulard water. The best way of applying this is to keep the part constantly covered with compresses moistened with this fluid during several days. We would prefer this plan to the immersion.

Irritating resolvents.—By this is meant camphorated spirits, soap liniment, eau de Cologne; all, in fact, which have alcohol for their base. So far from being resolvent, we are inclined to think that their effect is to bring on inflammation where it was not before, and increase it if previously there. They should never be applied in the first or second periods; in the third they are sometimes applicable. Much mischief is done by the indiscriminate applications of such medicaments, and therefore they ought to be proscribed in these cases.

Compression.—Some writers have recommended the use of compression in the first period of this complaint, considering it as opposed to the tumefaction of the parts affected; but reason and experience demonstrate that this means is then most hurtful. It can only be useful when the patient is getting better, and beginning to take exercise.

Narcotics.—Any means capable of removing or even allaying the pain must be serviceable: in fact, the pain acts as an exciting cause to inflammation, which it is so essential to prevent. Narcotics joined with alcohol, such as the absurd and contradictory association of an irritating and calming medicament, like laudanum, are hurtful. A simple aqueous decoction of opium, or the poppy heads, or infusion of saffron, employed in fomentation or poultice, is generally successful in allaying pain.

Local bleedings.—The application of leeches is sometimes useful, sometimes even indispensable, in the treatment; sometimes, however, it is hurtful. For example, when the sprain is slight, the subject weak, of a dry nervous temperament, there is no need for them; the other means suffice: but if the sprain is violent, the subject young, vigorous, of a lymphatic or sanguineous temperament, and if the swelling immediately becomes great, then leeches must be freely had recourse to. They should always be applied to the most cellular and fleshy parts, and several inches away from the strained parts. When applied immediately to the injured parts, they constantly produce troublesome effects. The irritation caused by the bites unites with that from the sprain, the swelling increases frightfully, and the inflammation becomes more intense.

Emollient applications.—Under this head we range poultices, warm baths, fumigations, and fomentations. These means, the advantages of which are incontestable in the treatment of sprain, are often very successful after leeching: We have observed that, when they are applied before the leeches, and particularly when very hot, they increased the swelling, and promoted the development of inflammation, rendering the pains sometimes so intolerable that the further use of them becomes impossible. We should then always premise a copious local depletion, and regulate the temperature, so as not to increase the heat in the affected part, which is already too considerable.

Treatment of the second period of Sprain, or acute inflammation of the distended ligaments.—Although in the first stage many means, apparently opposite in their mode of action, have produced equally satisfactory effects, we must not expect this in the second. There now exists an inflammation, painful in its nature and difficult to root out, owing to the organization of the affected tissues, and dangerous in its consequences, by its contiguity to a joint which it may involve. Only one kind of treatment now remains, namely the antiphlogistic. Thus the cold bath, but particularly alcoholic preparations, may produce the most fatal consequences. To remove all causes capable of inciting or increasing inflammation,—to diminish the quantity of blood carried to the part inflamed,—to oppose, as much as possible, the exaltation of vital properties in the affected tissues,—to destroy, or at least lull, pain,—to avoid or oppose the irritation of organs which sympathise more directly with the diseased parts,—such are the principal indications and the basis of treatment at this period. The complete rest of the affected joint, the horizontal position to prevent swelling, leeches in abundance, and with the precautions above mentioned, and then large and thick poultices made of linseed meal and decoction of poppies, are to be had recourse to. If poultices keep up the heat too much, fomentations may be substituted. The intimate connexion between the intestinal canal and the joints is now well known: it is, therefore, necessary to put the patient on a mild regimen, to avoid whatever may possibly produce gastro-intestinal irritation. It is amply proved by experience that indigestion, the abuse of spirits, &c. have an evil influence on sprains.

Treatment in the third period, when the inflammation has become chronic.—When the patient has not attended to giving the joint rest for a sufficient time, or when the treatment has been improper, &c. the inflammation of the distended ligaments may, in moderate cases, insensibly diminish in intensity; but, being always kept up by improper treatment, or injudicious exercise, it at length passes to a chronic state, and may thus perpetuate itself indefinitely. Consulted under such circumstances, the surgeon must not lose sight of the fact that this chronic inflammation, although it does not offer any very pressing symptoms, is not the less an exaltation of vital properties, which it is necessary to oppose by appropriate means: therefore exercise, exciting resolvents, and all stimuli, of whatever nature they may be, are directly mischievous. It is by not attending to these principles that physicians prolong such cases during years; and, what is more distressing, cause, by the empirical applications made use of, a degeneration of the affected tissues, inflammation and caries of the bones, and even loss of limb. It is then essential, in this third period, to employ still the means recommended in the second, but modified according to the different form of the inflammation. Thus rest is not so essential, at least, unless the mischief is so advanced, and disorganization so much to be dreaded, that it only remains to attempt a cure by anchylosis, and then the limb must be fixed in the most convenient position. But, should this not be the case, the joint should daily be moved gently, taking care, as much as possible, during those movements, to place the affected ligament in a relaxed position, so as not to bring on again fresh distentions. Leeches may be applied with much advantage, if there is swelling and pain; five or six, every two or three days, will be sufficient. Here it is particularly necessary to apply a principle in pathology too little known. In chronic diseases the treatment should be chronic, —that is, should act in a slow but continued manner. It is by employing local bleedings in this manner for thirty or forty days that the most satisfactory results have been obtained, not only in sprains, but in almost all slow inflammations, even with threatening of disorganization. When the inflammation is quite dissipated, and the joint in an indolent state, and still a puffiness and soft feel in the ligaments remain, we may then have recourse to resolvents, but cautiously, and without ever painfully increasing the sensibility of the parts affected. Goulard water, hydrosulphureous baths, and light frictions with camphor and calomel, mixed with lard so as to make an ointment, moderate exercise, the part being properly supported by bandages and laced stockings, if it is the foot.

Treatment of the fourth period, when there is disorganization of the inflamed parts, and other accidents.—The further we advance in the different periods of this complaint, the treatment becomes the more difficult and uncertain. When chronic inflammation has disorganised the white tissues,—when the ligaments, tendons, and synovial sheaths are already converted into a white mass, homogeneous and lardaceous, there scarcely remains any hope either of restoring these parts, or of stopping the progress of this fatal disorganization. When this alteration, generally known by the name of white swelling, is recent, and the health of the person good, the case sometimes ends favorably; but, if it is of long standing and deep seated, with lancinating pains, and particularly if the patient be scrofulous, all attempts at cure are useless: we can only palliate. Many means have been recommended in this fourth stage, as any thing which has for its object to destroy a deep-seated irritation by a superficial one, either of the skin or subcutaneous cellular substance, such as ammoniacal poultices, spirituous liniments, blisters, setons, moxas, cauteries, &c. When these means have succeeded, and there no longer is deep-seated inflammation, and no disposition to relapse, even under these favorable circumstances, too strong applications have reproduced the deep-seated inflammation by the extension of the superficial one, and have hastened the progress of a disorganization which had 'perhaps been stopped in its course. Judge, then, what disorders these applications must occasion when applied to parts already inflamed and the seat of the white swelling. The pain speedily becomes insupportable, swelling and heat come on; sometimes suppuration in the interior of the joint, with hectic fever, &c. till death closes the scene. We have seen subjects in the flower of their age, and whose general health did not appear much changed, perish within twenty or thirty days from the time of applying these means. One must, then, never lose sight of these results, and dread them still, even when the joint appears the most favorably disposed to stand without injury the use of moxa, setons, blisters, &c., since the inflammation caused by these means may extend to the subjacent tissues, and there bring on the symptoms which have only been lulled.

If, then, there is any hope of cure, it is more prudent and certain to employ those means recommended in the third period, modifying them always according to the circumstances: rest, partial bleedings from the part, emollient and calming topical applications, and, lastly, gentle resolvents, ought to form the basis of the treatment. If these means will not do, no other will; the disease is incurable, and the complaint goes on from bad to worse, till he either dies or submits to an operation by which the affected parts are removed. But this amputation is not always practicable, either from the situation of the complaint, (as, for instance, when seated in the pelvic articulation, or in the vertebral canal,) and also from various circumstances, which may contra-indicate its employment. It may then be useful to point out some fundamental rules in those cases where we might save a patient by sacrificing a part for the preservation of the whole, and those in which the operation would only add new sufferings without the chance of benefit. Now, where the patient has had his constitution generally and extensively altered before the local accident which calls for the amputation, it would not only be useless to propose amputation, but it would do harm. This then is one case where we should not amputate.

When the patient has had pretty good health before the accident, and chronic suppuration, with sanious absorption which usually accompanies it, has brought on a constitutional derangement, "*cacochymie*," attended with dyspnœa, dry cough, especially when the patient makes a deep inspiration or the chest is struck upon, colliquative diarrhœa, slow fever, partial night sweats;—amputation under these circumstances might remove the first cause of the symptoms, but will not destroy the effects produced on the respiratory or digestive organs. These are not capable of retrograding, because they depend not only on the chronic inflammation of the tissues affected, but also on the organic lesions produced in these tissues by prolonged inflammation. This then is another case unfit for amputation.

When there is a decided scrofulous taint in the constitution, it should forbid the operation.

When a patient is originally of a sound constitution, and experiences a deep-seated chronic inflammation, with disorganization, in one of the principal joints, as the foot, knee, wrist, or elbow, in consequence of a local accident, such as a bruise, a wound, or a sprain, if that patient is nearly free from fever, the digestive organs in good order, the chest sound, and none of the internal viscera are affected, even although he should be exceedingly reduced in flesh and strength, we must not despair; for, by removing the affected part, we remove the focus of disease. This then is a case in which amputation is prudent and necessary, and such patients will recover sooner from amputation than those where they are in high health when the operation is performed; for, in the first case, the system being reduced to a kind of languor and inertness by its losses and sufferings, does not present those febrile and inflammatory reactions, which in the other may sometimes compromise the success of the operation, and cause a fatal termination.*

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* Revue Medicale.

PATHOLOGY OF THE BONES.

A Dissertation on the Pathology of the Bones, with illustrative Cases; among others, a Case of the Removal of carious Ribs.

By WILLIAM A. M'DOWELL, M.D. of Fincastle, Virginia. (From the *American Medical Recorder.*)

THERE are few subjects connected with surgery, or I believe I might say with the healing art, of the same importance, that have been so much neglected as the pathology of the bones. Diseases of the bones are the most frequent in surgery, they are the most tedious, the most insidious, and the most loathsome: such considerations, we would suppose, should render a correct idea of their pathology matter of primary importance. But the fact is otherwise: though various diseases of those important supports are of daily occurrence to the surgeon, his treatment generally consists in little else than naming them, and, when christened, they are committed to the management of nature; or, on many occasions, by external emollient applications, relaxation or disease of the investing soft parts is added to the original malady.

The frequent occurrence of diseased bones early attracted my attention to their management: on consulting a variety of works with a view to elicit information, I met with such contrariety of opinions with regard to the causes, progress, and treatment of their diseases, that I was left unrequited and bewildered.

There exists so great a diversity even as to names and the distinctions of such diseases, that the practitioner is at a loss what name to give such cases as occur to himself; nor can he, in a great majority of them, adopt any appellation that will not be in opposition to some high authority; but his comfort may be, that he is countenanced by others equally imposing.

Only in one thing can any general accordance be discovered, which is to leave diseases of the bones, of whatever denomination, almost exclusively to the efforts of nature; which sometimes, after a tedious interval of loathsome and occasionally painful endurance, results in restoration; but more frequently in the necessity of amputating a limb, or in death.

The unsatisfactory result of my researches, arising from the contrariety of principles and the inefficacy of treatment on any authorised plan, induced me to investigate for myself; which investigation determined me in the adoption of pathological principles, and a mode of treatment, which I believe to be, for the most part, peculiarly my own.

It is with reluctance, and not without great diffidence of my ability to illustrate my positions, that I array myself in opposition to the doctrines of the respected and highly authoritative names of Bell, Boyer, and others; but the higher the authority by which error is propagated, the more extensive will be the injury we may expect it to produce, and the more imperative is the duty to expose it on detection.

Urged by such considerations, I am induced to submit to the profession the principles by which my practice is governed in the management of diseased bones, with several interesting illustrative cases. The plan of treatment alluded to is founded on the belief that the vis vitæ of the bones is generally inadequate, unassisted, to relieve them from diseases that have destroyed any portion of their structure; and that the interference and co-operation of the surgeon is more necessary in these diseases than almost any others that occur.

Besides the results of my own experience, many cases might be cited from the most eminent authorities in support of my views; particularly Mr. Hey's operations on the bones of the leg, for a disease which would be denominated, according to the nosology of Baron Boyer, "internal necrosis," and according to Messrs. John Bell and Samuel Cooper, "spina ventosa," but which Mr. Hey, perhaps with a view to avoid collision with any of those authorities, has introduced as a new disease, which he calls "abscess of the tibia." But none of these cases seem to have led their reporters to any more correct general conclusions; they still retained their preconceptions that bones possessed the capacity of separating mortified portions, after the manner and with the facility of muscular parts, without duly regarding their difference of structure.

Until such error in general principles is corrected, no extensive benefit can be derived from particular cases; for cases, whilst the surgeon yet labours under erroneous pathological views, constitute a guide to him only on the recurrence of a disease, a fac simile of the case successfully treated: cases are but facts, and special facts are so limited, that, to render them of extensive benefit to science, they must be constituted data on which to establish correct general principles.

Well satisfied that the pathological views of our most celebrated authors on diseases of the bones are incorrect, I shall, in the succeeding pages, from such facts as have occurred to myself, and from such as I have gleaned from others, endeavour to demonstrate such general methods of treating those diseases as seems to me to constitute an improvement in this branch of surgery.

In my detail of cases, some of which possess no novelty but the pathological views on which they were conducted, and which they are supposed to substantiate, as much brevity as consists with a correct idea of the situation of the patient and the nature of the case has been studied.

Physiology and pathology of the bones.—For the particular physiology of the bones, the reader is referred to works on that subject: it is sufficient here to observe, that all the bones have, like the soft parts, their arteries, veins, absorbents, and nerves. The blood-vessels destined for the nourishment of the external lamellæ are supplied principally from the periosteum; those destined for their interior structure generally enter near the middle of the long bones, and are distributed up and down in minute ramifications, throughout their cancelli or diploe.

The bones are endued with so little feeling that they are almost insensible to impressions, even of burning or decay, except when under some extraordinary excitement,* as from cold, &c. as is familiarly exemplified in carious teeth. Hence a bone may sometimes be utterly destroyed before it is discovered to be diseased. In the succeeding observations, to keep clear of ill-defined distinctions, I shall use the term necrosis for dead bone, from whatever cause arising; distinguishing affections of the lamellæ from those of the cancelli by the terms external and internal; conceiving, with Mr. Cooper and other good authority, that caries is of the same character with necrosis, and that it is necrosis of a smaller portion of a bone, (and that its extension throughout the entire bone constitutes complete necrosis,) that term will imply so much when hereafter used.

Necrosis proceeds from various causes, constitutional and casual. When arising from casualty, it generally proceeds either from denudation of the bone, from external violence, or from long continued application of cold, interrupting the internal structure. When the periosteum is by violence detached from the bone it invests, a clot of effused blood is interposed, which, if not speedily absorbed, (which it generally is,) presently brings on necrosis or caries of that part of the bone on which it lies, by *cutting off its requisite supply of blood*. In this, let it be understood, I conceive a marked difference to exist between the pathology of the bones and of the soft parts. The interruption of one or more of the smaller vessels conveying blood to soft parts, or even of very large vessels, is easily and speedily amended by dilatation of inosculating vessels: but in the bones, though their vessels too have their inosculations, yet those inosculating vessels cannot dilate with the same facility, nor to such extent, owing to the unyielding calibre of the long canals, through which they are transmitted.

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* John Bell says, "no pains are equal to those of the bones and joints;" but in his Principles of Surgery he states one case, which, on good data, he concludes originated in an injury inflicted on the bone ten years before disease was manifested; during all which time it had progressed with little or no pain. On dissection, it was found much bone had been destroyed. He also reports several other cases, less remarkable, but to the same purport.

Baron Boyer supposes necrosis from violence arises only from blows, or from pressure of sufficient force to depress some of the lamellæ, or otherwise directly injuring the tissue of the bone: but Mr. John Bell states many well-authenticated cases of necrosis, from violence so slight as not to interrupt continuity of the soft parts; some cases even arising from forcibly pulling the hair of the head, in which cases we cannot conceive the cause adequate to have produced the effect in any other way than by interrupting the necessary supply of blood to the bone beneath.

A clot of blood, remaining a length of time, produces necrosis of a scale of the lamellæ on which it lay, which excites the surrounding structure to the formation of pus, as a medium of separation between the living and the dead bone; or the clot of itself, producing irritation foreign to the nature of the part, may excite to the formation of pus. This fluid accumulating, either bursts through the periosteum and integuments, and is discharged, or encountering a firm resistance from the periosteum, (which is often the case,) attains the necessary space for its increased bulk, by extending the separation between the bone and its periosteum, sometimes entirely denuding it, and thus effecting its complete necrosis. This is what I would term external necrosis, and, unless the pus is evacuated and allowed a free vent, it becomes the cause of the extension of the disease from bone to bone, until sometimes many bones are affected, as in the following case:

I visited James Summerfield, of Newcastle, aged twenty-three, in autumn 1822, afflicted with what he termed white swelling. He believed the disease to have originated from a scuffle, in which his thigh had been hurt, two years before. In addition to a very small sinus, four or five inches above the knee, an abscess was pointing in the groin, which I opened. After evacuating the pus, injected fluids readily passed from one opening to the other; the whole femoris appeared to be denuded. This was the first case of the kind of importance that had occurred in my practice; conceiving it a hopeless one, I ordered the best authorised treatment. He lived upwards of two years afterwards.

No callus was deposited, nor was there any tendency to amendment discovered during that time. Before he died, suppuration had extended to the foot, and a sinus had formed over the posterior spinal process of the os ilium.

As external necrosis is of most frequent occurrence, and consequently most important to be well understood, we will first take a view of the changes the appearance of the bone undergoes, and the requisite treatment adapted to the changes of this particular form of the disease.

"The colour of a living bone," says Fallopius, "is white, delicately tinged with red; that of a dead bone, unmixed white; that of a putrid or carious bone, livid or black." Living bone is also distinguished from dead by freely bleeding when scraped, and, where only a small plate of lamellæ is carious, the sound bone around the plate is slightly elevated or swelled, and bleeds particularly free; easily marking the line of distinction.

When, from denudation, the external lamellæ of a bone is found necrosing, and we have reason to believe its internal structure is sound, we should use every effort to reanimate, or resuscitate (if I may use the phrase,) the necrosing portion.

1st. By making a free incision through the integuments at the most depending part to which pus has attained, and another at the upper, or at that part on which the injury was inflicted, with a view to discharge the pus, and stop the extension of the disease.

2d. By exciting the exterior of the bone and the interior of the periosteum, by stimulating washes; by passing setons, when the parts will admit it, from a superior to an inferior opening, along the bone; and by compression from without with a roller, or with the laced stocking.

The beneficial effects of this plan were strikingly exhibited in the following case:

Tom, a negro boy, the property of Mrs. Rowland, aged ten years, jumping from the top of a fence, fell, and struck the tibia against a rail that lay on the ground. A small tumor arose, which at the time was but little regarded. About fourteen days afterwards, general swelling of the leg commenced, attended with severe pain: the swelling soon became most where the original injury was inflicted, at which point his attending physician, Dr. S. O. Caruthers, made a small opening with a lancet, from which there was a free discharge of pus. But the swelling below still extended towards the foot, and he daily grew worse. Hectic fever supervened, with colliquative sweats and diarrhœa. Those symptoms were combated with the ordinary remedies: nevertheless, his danger became so eminent, that I was called in to amputate the leg, and visited him with that view on the 22d November, 1825. On enlarging the small issue already made between the tibia and tibialis anticus, to a size that admitted the introduction of the finger, both the tibia and fibula were found denuded as far as they could be examined, and appeared dead, exhibiting the white graveyard appearance. In conference with Dr. C., on representing the success of my restorative endeavours in cases I conceived to have been of similar character, we concluded to delay amputation, and make a trial of the kind. With such views, a large knitting needle (having no probe of sufficient length,) was introduced at the opening above named, and passed down along the naked tibia, passing between the two bones, and was cut out posterior to them, between the malleolus externus and the tendo Achillis; believing this to be the most depending situation to which pus had arrived. A stout skein of thread was passed from one opening to the other, and the roller was applied from the toes to the knee. I never visited him afterwards, but was informed by Dr. C. that the fever and constitutional symptoms, after this operation, quickly yielded to the same remedies they had baffled before, and that his recovery was rapid and complete.

By those means much may be done, if resorted to in time; nor should such treatment be omitted within any given time, unless the bone were found livid or black; in which event, the dead bone should be removed, or the limb amputated: but the former I should generally prefer, *even if it were the whole femoris*, for then nothing short of amputation at the hip could be substituted. Here my conclusions may be deemed hasty, inasmuch as the fact is well established that such dead bones have actually been found inclosed in newly generated callus. Such pathological information I deem serviceable only as affording the assurance that a speedy renewal of displaced bone, in a young subject of good constitution, may confidently be expected if unimpeded, which should admonish the surgeon that, in aid of nature, he should endeavour to remove all obstacles and impediments to her process.

Nowhere have I ever met with the history of the life, or cause of the death, of any one in whom such phenomena as inclosed bones have been discovered: hence my conclusion is, that those bones probably introduced their natural proprietors into the dissecting room. If so, the fact affords but an indifferent reason for the surgeon leaving them unmolested.

Case.—Virginia Harvey was, in the month of February 1816, at two years of age, through carelessness of her nurse, in her mother's absence, very much exposed to cold: the succeeding day she was unable to walk, complained very much of pain in the right leg, which was at first unattended with swelling or discoloration; but in about three weeks it swelled, pointed, and was opened about midleg, and pus was discharged, with some relief from pain, but with no other amendment. About six months after this, hectic symptoms becoming urgent, a consultation of physicians was called: an incision was made, exposing the bone from within about an inch of the head of the tibia, to within the same distance of the ankle-joint. The bone was denuded and black. The free evacuation of pus from this incision mitigated the hectic, and for a time relieved constitutional symptoms; but this black bone, dead and detached as it was from its periosteum, though as foreign to the surrounding parts as is the dead to the living, was, in conformity with the precepts of the best surgical authorities, left in its place, where it remained nearly six months longer, in which time it exfoliated, plate by plate, near the ankle, until the lower end was released, and projected through the integuments. In this situation it remained some time longer, and was cautiously moved a little every day by her attending physician. During all this time deep-seated abscesses, some of them very large, one after another, arose on different parts of her body, inducing the apprehension that the bones generally were diseased. Her physician at last discovered that callus was forming behind this black bone, and that it was giving the new bone a misshape, pulled it out, and found that an entire new bone had formed behind it, which was much bent backwards a little below the knee, from pressure by the upper head of the old tibia. Thirteen days after the removal of this dead bone, the leg had completely healed, together with every abscess upon her body; and, by the entire relief from hectic, which was removed with the bone, her strength had so much increased, that the little creature could not be prevented walking often around the room, aiding and supporting herself by holding to the furniture, which premature pressure increased the bend the new bone had already suffered, and caused a shortening of the leg of an inch and a half or two inches: the leg is, in other respects, equal to the other one; her constitution and general health, from that to the present time, has appeared as good as common.

The above case is given as related to me by the attending physician, Dr. Patterson, and by Miss Harvey's mother from memory; no notes having been taken of her case at the time of attendance. Dr. P. does not recollect with sufficient distinctness to determine whether this was a case of external or internal necrosis.

If the exterior of a diseased bone is discovered to be black only in parts, every effort should be made to reanimate so much of it as is not too decidedly carious, even though the whole bone be denuded. If in any encouraging degree successful, so soon as the lines of distinction could be designated, the carious portions should be forcibly detached, without wasting any time awaiting the dubious process of exfoliation; for, if exfoliation is desirable and useful, it is as useful if effected as if awaited by the surgeon.

Case.—Matilda, a mulatto woman, the property of General J. Preston, aged twenty-five, was visited 26th December, 1823: she had a deep-seated swelling, and pain below the middle posterior part of the thigh, which had been of several weeks' duration. Discutient liniments, blisters, mercurial plasters, and poultices, were applied without effect. On the 2d January, 1824, a free incision was made, and about a pint of pus discharged from a situation much deeper than external examination had led me to expect: the bone was denuded, as far as I could examine it up and down, to the extent of eight or nine inches; the opening was sustained by tents, and a roller was applied from the toes to the hip; at each dressing, tincture of myrrh was freely injected. By the 1st of March, amendment was such that only a small denudation of bone remained, not exceeding an inch. On the 2d of April, a carious plate was forcibly detached; eight or ten days afterwards, on examination, the bone could not be reached with the probe; and, on the 18th April, she was discharged cured.

No satisfactory account could be given of the origin of disease in this case.

The following case is introduced to exemplify the extreme tardiness and uncertainty of nature's process to exfoliate necrosing bone.

Bill, a negro man, the property of Mr. S. Kennedy, suffered a compound fracture of the femoris when a boy, from the falling of a tree upon him. Reunion of the bone was tedious, and, after it was completed, the opening through the integuments continued, and became fistulous. On the 9th June, 1821, I was called to examine him, (eight years after he had received the fracture.) The issue was situated about six inches below the trochanter major, through which the probe readily reached rough naked bone; the muscles of the thigh and leg of the diseased limb were flaccid and shrivelled, and the limb was but little more than half the size of the other. His general health was such that he could endure no fatigue, and caused him to pass most of his time in a recumbent posture.

By the advice and with the co-operation of Drs. Patterson and Madison, such an incision was made as admitted free examination of the bone. A caries was discovered about an inch in diameter, rough and black; it was surrounded and tightly embraced by the edges of the sound bone, which seemed disposed to close over it, resembling the appearance sometimes remarked in a tree, the recent growths of which are in the act of closing over a canker it has sustained from partial decortication, or from the removal of a chip.

This black scale, more than a quarter of an inch in thickness, and still very firm, was broken up from its place, and removed. The sinus healed in a few weeks; the boy regained his general health; and the diseased limb, in the course of a few months, recovered the healthful appearance and the full size of its fellow.

I am well satisfied, from observation and research, that carious lamellæ, left to nature, are more prone to reduplicate than to exfoliate. The very efforts of nature for self-preservation in those cases, when inadequate to the purpose, expedites the devastation; for bones are not so prone to decomposition through mere loss of vitality.

They moulder in burial-grounds for centuries without assuming the black colour they so very soon acquire in necrosis, Their inert durability has rendered them the only memorials of generations of men and animals swept from the face of the earth time out of mind.

To what, then, are we to ascribe their rapid decomposition in necrosis? To nought, I conceive, but the abortive efforts of nature's process in the adjacent sound structure to effect a release from an unnatural connexion with the dead. The inflammation and softening, preparatory to the formation of pus as a medium of separation, expedites the extension of necrosis; those softened and inflamed parts, irritated until exhausted by the protracted contact of an immovable caries, and enveloped in eroding pus,* grown acrid from age, are at last found necrosing in their turn. Hence the difficulty of arresting the progress of caries. If the process of exfoliation is depended upon, by the time the first scale is exfoliated, that part of the bone from which it has detached has been destroyed by its own over-action and over-excitement, and constitutes another subject for the same process.

The fact is familiar that, if a tooth becomes affected with a carious speck, if the caries is uninterrupted, it extends to the destruction of the entire tooth; and we are also familiar with the fact that, if the speck is removed, the further progress of decay is arrested; but this is all so familiar that we forget a tooth is bone.

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* Whether erosion is ever produced by pus, I am aware is a controverted question; but, bland and emollient as it is on its recent formation, I was satisfied, by the following case, that it sometimes becomes acrid or eroding on confinement after its formation.

John Douglas, Esq. near Pattonsburg, struck a man in the mouth, and cut his knuckle on a tooth down to the bone: the cut healed, but soon afterwards the finger swelled, and, through mismanagement of a woman famed for curing swellings, it in a few months extended to the elbow, and the arm had to be amputated. I was invited by Dr. Patterson to assist him in the amputation. Examination after its removal discovered the anterior muscles of the forearm to have been completely destroyed: the skin contained the pus like a sac; the radius and ulna were entirely denuded, and of the dead white colour; the bones of the originally injured finger were livid.

I suppose those muscles to have been acted upon by the pus, for I cannot well imagine that the absorbents retained vital power enough to have effected their removal, when the organization of all the rest of the structure of the arm was destroyed.

I have myself seen the caries of a tooth extended to the alveolar process.

In November, 1826, I saw a negro woman, the property of Mr. J. Thompson, who had a fistulous opening from the lower jaw, opposite the root of the largest grinder. Finding this tooth decayed, I extracted it: a carious portion of the alveolar process adhered to its outer root, to the extremity of which the tooth was decayed. The probe now passed through the fistulous opening into the mouth.

This opening had been of more than twelve months' standing, but healed in a few weeks after the extraction of the tooth.

[To be continued.]

HOSPITAL REPORTS,

(Principally condensed from various Periodical Publications.)

FEVER.

Cases of Fever, treated at the INFIRMARY OF PHILADELPHIA.

THE following cases will serve to illustrate the practice of our transatlantic brethren in fever.

CASE I.—Moses Howard, (black,) aged twenty-three years, was admitted into the Almshouse Infirmary, on the evening of the 24th of September, 1826. He had been ill about three weeks. While at work at his trade, that of a blacksmith, he felt overcome with heat, and in this state he swallowed a potatoe, which caused immediate sickness of the stomach, Feeling thirsty, he took a drink of water, which was soon followed by puking, and he threw up what he had eaten at dinner. After vomiting he felt better. At dark he was worse, and had nausea. He rested tolerably well through the night. After this he was attacked with rigors every day, followed by fever, which set in at noon and continued through the afternoon and night. Towards morning there was a remission of the febrile paroxysm. For the last three days his fever had been continued, and was attended with delirium.

The symptoms on admission were—pulse quick, without tension; skin hot and dry; tongue foul, covered with a brown crust, except at the edges, dry, and rather contracted; lips dry, scaly; teeth fuliginous; eyes heavy, the upper half of the ball more injected than the inferior portion, suffused with tears. He has no appetite whatever; there is tension of the abdominal parietes; complains of pain in the abdomen, increased by pressure over almost every part of it. His head is painful, and attended with delirium.

25th.—This morning I find him about the same as last evening. He dressed himself, and was anxious to go down stairs; his hands are cold; he picks at the bedclothes, and has slight subsultus tendinum. I did not disturb him during the night, but commenced the treatment this morning as follows, viz.:

> A blister to be applied to the occiput and back of the neck; bowels to be evacuated by simple injections; feet to be bathed in water as hot as can be endured. Diet to consist of preparations of sago; drink to consist of barley water, acidulated.

About eleven o'clock, Dr. Jackson saw the patient. At this time the eyeballs were highly injected and rolled upwards; skin cold; pulse small and frequent; stupor.

> In addition to the treatment, four cups were directed to the head,—two of which were to be dry, and two with scarifications; also twelve leeches to the epigastrium, followed by warm fomentations to the abdomen, and frictions of terebinthinate decoction of Cantharides to the extremities.—The leeches were applied in the evening.—Blankets wrung out of hot water to his legs.

26th.—Very much improved. His strength has increased. There is reaction with more heat of the skin; a better pulse; no subsultus tendinum; eyes less injected, and not turned upwards.

28th.—Better.

> Treatment consists in frequent application of blankets wrung out of hot water to his extremities. To have today a simple injection and a dose of Castor-oil. The warm fomentation to the abdomen to be continued. Injections of cold flaxseed mucilage.

29th.—Improving very fast: the heat of his skin is nearly natural; tongue becoming moist.

> Diet today to have the addition of chicken water.

30th.—Improving.

> The warm fomentations are still continued to the abdomen. Bowels kept open by simple injections of flaxseed tea.

October 1st.—Still improving; tongue nearly clean; pulse regular; strength increasing.

2d.—Sitting up this morning, but is ordered to bed, as he is not considered sufficiently recovered to bear exertion.

> Diet—soup, gruel, &c.

Evening.—Complains that his bowels are confined. Ordered a simple injection to remove this.

3d.—Sitting up at times; complains yet of debility.

> Diet—soup, bread, gruel, &c.; drink, barley water.—Directed him to drink of the following tonic decoction: ℞. Pulv. Cinchon. opt. ℥ss.; Rad. Colomb. ʒij.; Cortex Aurant. ʒj.; Cortex Cinnamon. ʒss. Add to a quart of boiling water; reduce by simmering to three half-pints.

7th.—Walking about; fairly convalescent.

23d.—This patient has rather a slow convalescence. This Dr. Jackson ascribes to too great an indulgence in eating meat, &c.; he therefore orders him to have nothing but barley water for twenty-four hours. To take also ℥ss. Ol. Ricini.

November 4th.—Convalescence proceeded rapidly under a more restricted regimen. Discharged cured.

Observations.—This case, at the time it was presented to our notice, offered a train of formidable symptoms. I remarked to the clinical class at the time, that it had been customary to combat the condition of the system, which was one of great prostration, with tonics and stimulants, freely administered. But this practice in the Almshouse having so frequently failed to accomplish the ends that had been looked for, I was discouraged in attempting it in the case then before us. The state of the intellectual faculties, the injected condition of the eye and its tendency to be constantly rolling upwards, with the convulsive twitchings of the muscles, were complete evidence to my mind that the meninges of the brain were the seat of considerable irritation: the dry, brown, parched tongue, the extreme sensibility of the epigastrium, the nausea that had early existed, were equal indications that the intermittent irritation had become fixed, and we had now a gastritis of no slight intensity to contend with. The prostration was, then, the consequence of this condition of the brain and stomach, by which, in the first place, the nervous functions were in a state of lesion, and were maintained in that state by the sympathetic irritation directed on the brain from the stomach; and, in the second place, the concentration of irritation in the stomach and small intestines, constituting them a focus of the vital energies and the circulating fluids, at the expense of other organs, was the immediate cause of the diminished actions and enfeebled functions of the skin, of the central organ of the circulation, and of the pulmonary system. From this view the indication was to diminish the excess of irritation in the brain and stomach, and operate a revulsion on the surface. Notwithstanding the degree of prostration and apparent debility, I would therefore venture on a direct but moderate local depletion, to act on the two points, the seats of the irritation; to allay that of the stomach by cooling and demulcent drinks; while the skin was excited by means of moist heat, by enveloping the half of the body in blankets wrung out of water as hot as could be borne, and renewed night and day as soon as they began to cool. This mode of stimulating the skin, when it is intended to produce a revulsion from the brain, I prefer to sinapisms or blisters, when cerebral or meningeal inflammation exists, as pain is a direct and energetic stimulus of the brain and almost every organ, and often aggravates, and even excites, inflammations in the brain, stomach, &c. The result of the treatment was highly gratifying, especially from the rapidity with which the very formidable symptoms disappeared. It is to be remarked that the convalescence was retarded by the full diet allowed, in the expectation of conferring strength.

Case II.—Ann Riggins, aged thirty, fair complexion, delicate frame, sober habits, admitted into the Almshouse, February 12th, 1826. She had been sick upwards of three weeks, and was a patient of one of the Dispensaries. After exposure to wet and cold, she had been seized with pains in the back, head, and extremities: fever succeeded, and which had continued until her entrance into the house. According to her statement, she had taken during her treatment four emetics, a number of powerful purgatives, and nitre powders. A large blister had been applied over the epigastrium, showing that gastric symptoms had existed, and her extremities were also blistered.

At her admission into the ward at twelve o'clock m. she presented the following symptoms: skin dry and husky, eyes injected, cheeks flushed; tongue dry, hard, cracked, pointed, brown, and crusted; bowels costive; extremities cold; pulse scarcely perceptible; breathing short and difficult; stupor amounting almost to insensibility; great distress evinced by pressing the epigastrium.

The lower half of the body was immediately wrapped in blankets wrung out of warm water; a common house injection was ordered. Acidulated barley water for drink.

Evening.—Skin more natural in temperature and feeling; pulse more developed; coma continues.

Cups to be applied to temples and back of neck. Cold to head. Warm fomentations to lower extremities to be continued during the night.—Same drink.

13th.—Is much better: stupor relieved; converses freely, and gave the history of her disease and previous treatment. Complains of no pain except when she coughs; no pain in head; eyes less injected, and face not as much flushed; tongue becoming moist, but is furred; feet warm; pulse full and soft; bowels freely opened by injection. Continue treatment.—Five p.m., slight increase of fever, with some difficulty of breathing; bowels not moved since morning. Injection given at nine p.m.: fever soon after subsided.

14th.—Improving. Fomentations omitted.

15th.—Has return of pain in head; eyes more injected; tongue brown and dry; pulse feeble; bowels not opened.

The warm fomentations to be renewed, and an enema to be administered.

Nine p.m.—Pain in the head removed; tongue moist; no fever.

16th.—Her feelings are better; a disposition to coma exists; the eyes are injected, and, when sleeping, they roll upwards under the lids half closed.

Fifty leeches behind the ears; and an irritating revulsive injection of Infusion of Jalap ʒj. Senna ℥ ij. Water ℔j.

Evening.—Bowels opened three times by injection, stools natural colour. Head very little relieved; tongue moist, but furred.

Sinapisms to ankles, and fomentations to be continued; hair to be removed from the head; and cold constantly applied during the night.

17th.—Much better: no disposition to drowsiness; eyes clear; no pain in head; tongue furred, but white and moist.

Ordered ℥ss. Castor-oil. Sago for diet.

18th.—Continues mending. Bowels opened by oil; tongue moist, fur cleaning off; no pain in epigastrium or abdomen; pulse and skin natural.

19th.—Entered into convalescence; diet increased.

Observations.—Riggins had been subjected to the perturbating practice, employed with great activity, but without the least improvement: it may be said, with an aggravation of the symptoms. When she entered the house, her condition was certainly most unfavorable, if not desperate, but a treatment calculated directly to diminish the inflammation existing in the stomach and meninges of the brain brought about an immediate change, and placed her in safety.

CASE III.—Fleshower, aged about thirty-five, an assistant nurse in the women's clinical medical ward. In the fall she had intermittent fever, for which she had entered the house: it was accompanied with violent paroxysms of fever, headache, and gastric irritation. She was bled from the arm, and put on barley-water for sole diet. The intermittent disappeared after the third or fourth day of treatment. She had continued well, and was employed as an assistant in the ward until January 10th, when she was attacked with chill, pains in limbs, followed by intense headache, with pain in the chest. The bowels were bound; the tongue dry, furred, brown colour; nausea, restlessness, jactitation; epigastrium sensible, pressure occasioning acute pain; thirst ardent; eyes injected with blood; pulse full, frequent, tense; skin hot and dry.

Twelve ounces of blood were taken from the arm; an injection of Infus. Sennæ was directed; cups to head and epigastrium; blankets dipped in hot water to the legs; cold to the head; acidulated demulcent drinks taken cold.

January 11th.—Bowels opened by injection: pain in epigastrium increased; distress of patient greater: all the symptoms more unfavorable. Simple enema to be repeated, and sixty leeches to epigastrium: the leeches were applied at twelve o'clock.

Evening.—Better in every respect. Immediately after the application of the leeches, the headache, pain in epigastrium, restlessness and distress, were dissipated. The skin is now moist and of natural temperature; tongue moist and soft.

The hot fomentations to lower extremities continued. Diet, acidulated barley-water.

12th.—Improving. Diet continued. 13th.—Still better.

14th.—Committed an error of regimen: fever returned; tongue dry, furred; pain in side. Cups were directed, to be followed by a blister. Not experiencing relief, some hours after V.S. ℥xij. Absolute diet. 15th.—Better.

16th.—Breathing oppressed; pain returned.—V.S. ℥viij.

17th.—Better; pain continues, and pulse excited.—V.S. ℥x.; treatment, absolute diet. 18th.—Improving.

19th.—Symptoms have all disappeared. Increase diet.

20th.—Convalescent.

Observations.—In this case the patient came under treatment which rarely happens with the patients of this institution, from the commencement of the disease, and the physiological treatment could be brought into action against the simple disease, not aggravated by the effects of disturbing remedies on the organs. Cups were resorted to in the first instance, to economise the expense of leeching. I have always observed, however, that cups to the epigastrium, when it is very sensible and pain is acute on pressure, by the pain they occasion, aggravate the symptoms. This case is an instance of the kind. The effects of the leeches in reducing gastric irritation, were most conspicuously displayed in this case. It is also to be remarked that the cerebral symptoms were immediately relieved on the diminution of the gastric irritation by the leeching. This circumstance I have repeatedly observed. It is a strong proof that in fevers the cerebral disorder is sympathetic; and this effect may almost certainly be relied on, from local depletion from the epigastrium in fevers, when the continuance of the morbid sympathetic irritation has not become permanent in the brain or its meninges.

On the 14th, pleuritic symptoms were manifested, which easily yielded to a pure, unmixed antiphlogistic treatment.

The above cases are detailed by Dr. Jackson, in the American Journal of the Medical Sciences.

COMPOUND FRACTURE.

Cases of Compound Fracture, treated at the Royal Infirmary, Glasgow.

The melancholy terminations of those cases of compound fracture which the young practitioner has witnessed under the usual hospital treatment, naturally induce him to form the general resolution of amputating almost indiscriminately. He knows well that, whenever a case is presented to him, instant decision becomes necessary, that he has it not in his power to watch the first symptoms of approaching gangrene, and then to arrest its progress by the knife; but that, before replacing the torn integuments, or adjusting the shattered ends of the bone, he must fix, and irrevocably fix, amputate now or never. When, added to this, there crowd upon his mind the dreadful suppurations and mortified limbs of the hospital, can it be wondered at that the knife appears to him the safest line of conduct?

Leeches, cold applications, general depletion, and antiphlogistic regimen, large soft poultices and frequent dressings, all seem soothing and mild, and calculated to allay irritation: but do they prove so? Do not fulness of vessels and effusion supervene, tension of the fasciæ, erysipelatous integuments, irritative fever, deep-seated abscess, and gangrene?

What is compound fracture?—A broken bone, with a wound or tear of the soft parts. Then why do such frightful consequences seldom or never follow either of these two injuries, when occurring singly?—Because, in either of these two accidents, the limb is firmly bandaged, the weakened and torn vessels thereby supported, injection below the fascia prevented, and, above all, nature in her operations not too much interfered with.

Case I.—Angus Cameron, æt. fifty, an engineer, was admitted on the 7th July. Whilst removing some stones near a steam-engine, the wheel of the engine caught his right forearm, and, in endeavouring to save the trunk of his body, the left forearm became entangled also. The right radius was fractured one-third up, and on the back of the forearm there was a wound nearly four inches long, through which fractured portions of bones could be felt. Left radius was also fractured two inches above the carpal extremity, the superior portion of bone was much displaced, inwards and backwards; and on front of forearm, one-third up, there was a wound one inch and a half long, through which the fractured bone could be felt. On the anterior aspect of the superior third of the left forearm, there were two small wounds, and the probe passed freely and extensively under the surrounding integuments. The muscles of both forearms were severely lacerated, and there was much infiltration of blood, particularly in the left forearm, where the integuments felt very tense.

The wounds were dressed with oiled caddis, the many-tailed bandage applied, and cushions with wooden splints, after the manner for simple fracture.

On the 12th (five days after admission) it is reported: "Complained of no pain of either arm till last night, when the right began to be troublesome. On removing the dressings, there appears to be no swelling of any consequence, and the caddis is only moistened with healthy pus. Splints have not been removed from left arm. Slight delirium last night, but is costive, and speaks of pain about præcordia."

Two days afterwards the right arm was again bared, and about four ounces of thick purulent matter were pressed from an abscess in thei mmediate neighbourhood of the wound. From this time forward the right arm was dressed every day, and a small opening in the bandages left to give exit to the pus.

It appears unnecessary to lengthen out the report by recording trifling daily changes, either on the state of the right arm or of the general health; but the progress of the left arm deserves particular notice.

Although at first the left arm was looked upon as the more seriously injured of the two, yet he never complained of pain in it, nor were the splints or dressings removed till the 8th of August, being one month and one day after admission. The following is the report of that date: "Makes no complaint today, except of slight pain about left elbow-joint. Splints and dressings have been removed for the first time. Little or no pus, no swelling nor tension, one of the wounds all but closed, and only slight superficial ulceration from pressure at the elbow-joint."

Notwithstanding these favorable and encouraging circumstances, unpleasant symptoms had before this date manifested themselves, and his ultimate recovery was despaired of. Most extensive sloughing took place over the sacrum; and on the 16th of August he expired.

Dissection.—Fracture of the left radius had united, and the soft parts appeared firm and healthy in every part of the forearm. In the right forearm, the inferior portion of the fractured radius was split through its whole length. The superior and inferior portions of the bone at the seat of fracture were bare to the extent of two inches, and there was not the slightest appearance of an attempt at union.

CASE II.—John Durrough; æt. thirty-two, a labourer, was admitted on the 16th July. A scaffold, two stories high, supporting a quantity of stones, on which he was standing, gave way. Some of the stones struck the lower jaw, the left ankle, and left hip, inflicting wounds on the two former. The lower jaw was fractured. The distal extremity of the left tibia was fractured transversely about an inch above its articulating surface. The fibula was fractured obliquely immediately above the malleolus; and the outside of the joint was laid open, anterior and posterior to the extensor tendons. On the outside of the ankle there was a wound of the integuments six inches long: it commenced at the extremity of the malleolus, and ran upwards in the course of the fibula, forming a flap, three inches broad from before backwards. On the inside of the ankle, there was another wound of the integuments: it commenced anterior to the inner malleolus, and ran transversely inwards and backwards around the ankle, communicating with the longitudinal wound on the outside of the ankle, both internal and external to the tendo Achillis. Along the outside of the joint there were many bony particles, which had been detached from the extremities of the tibia and fibula. The ankle-joint was but very slightly displaced. The large arteries, and all the tendons around the joint, had escaped, and were covered by the fascia;

and the internal malleolus was not divided, nor were the ligaments injured on this side of the joint.

Pledgets of oiled caddis were placed over the wounds at the ankle, and fixed by adhesive plaster, and the limb put up after the manner for simple fracture. Neither splints nor dressings were removed till the 27th, being eleven days after admission. A little healthy pus was found on the wounds, which had begun to put on the appearance of healthy granulating sores. There was no redness, tension, or pain on pressure, at any part of limb, which was put up again in the same manner.

August 2d.—Splints and dressings have just been removed for the second time: wound has a granulating and healthy appearance. About half an ounce of pus, thick and healthy, and without fœtor, discharged. No redness nor tension. Limb can be freely moved about, for the application of bandages.

24th.—Two days ago had rigors, and an enlarged gland was observed in groin. Some erysipelatous redness on fore part of ankle appeared yesterday, and inflamed absorbents about knee-joint. Leeches were applied, and the pain and fever have diminished.

25th.—Redness increasing about knee-joint. Leeches were repeated this morning, with relief. Splints have still been kept on leg.

Sept. 1st.—Redness of thigh gone for some time, and feels no pain, except at outer part, and back of foot, where a small abscess has formed. A puncture has discharged half an ounce of pus.

10th.—Wound at inner ankle cicatrised; that at outer seems a healing sore; bones have reunited. Splints finally removed, being the fifth time they have been unbuckled since first application.

Straps and simple bandaging were used from this date, and on the 6th October he was dismissed cured.

Case III.—Thomas Poole, æt. eight, was admitted on the 17th of August. Whilst standing in the street, he was knocked down by the shaft of a cart, and one of the wheels went over his right leg and left foot. The toes of the left foot were fractured, and torn from their connexions to the metatarsus. The integuments of the right leg, from the superior third of the tibia, along the ridge of that bone to below the inner ankle, were detached from before backwards, and formed a thin flap above three inches broad. The fascia of the flexor muscles was destroyed, and the muscles separated from one another, but without loss of substance. The posterior tibial artery could not be felt. The tibia was fractured obliquely; the fracture communicated with the wound, and some small splinters were detached about four inches above the ankle. The foot felt cold.

All the five toes of the left foot were amputated, and a small portion of the distal end of the metatarsal bones clipped away. —The right leg was put up with straps, oiled caddis, bandage, and splints.

"27th (ten days after accident).—Bandages and dressings have just been removed for the first time from right leg. Little or no suppuration, no sloughing, and no tension of surrounding integuments. Surface of sore has a florid, granulating, and healthy appearance.

October 1st.—Fractured leg dressed again; pus healthy; granulations rather luxuriant and florid.

5th.—Third dressing of fractured leg: new skin beginning to shoot from every point. Bones united; granulations rather flabby, protracting the cure.

From this time forward it was treated as a common sore.*

HERNIA.

Strangulated Hernia in an Infant twenty days old: Operation.

Treated by M. DUPUYTREN, at the HOTEL DIEU.

ON the 14th of March, a male child, twenty days old, was admitted, presenting all the symptoms of a strangulated hernia: a shining and painful tumor in the bend of the right groin, descending to the scrotum, nausea, hiccough, stercoraceous vomiting, but not a complete suppression of stools. Leeches were applied; the infant was put into the warm bath, without success. The mother declared that this condition had lasted for three days. M. SANSON, who caused the child to be brought to the hospital, had no doubt of the existence of a hernia. M. DUPUYTREN examined the case with great care: the taxis caused a portion of the tumor to re-enter, which reappeared the moment the compression of the fingers was removed. Uncertain as to the line of conduct that ought to be pursued, M. Dupuytren caused the infant to be taken to the amphitheatre, and proceeded to a fresh examination of the parts, preceding it by some general considerations, of which the following is a summary:

Inguinal hernias, according to the Professor, are not very uncommon at this age, and even in female children the proportion of these hernias is greater than of crural, which he thinks may be attributed to the want of development in the pelvis; but what may be considered as very rare at so tender an age, is a strangulation so marked as to call for an operation. The present is the only instance of the sort which M. Dupuytren has met with in so young a subject. The testicle appeared to have descended into the scrotum; it is situated at the lower and posterior part of the tumor, which at its lowest part appears to contain a fluid, which extends along the chord as far as the superior part of the inguinal canal, which it entirely fills.

Some cases, in which, from the symptoms, the existence of a strangulated hernia has been suspected, and in which the operation has proved the mistake of the surgeon, must be taken into consideration: three or four times a swelling of the chord has imposed upon the operator. Lately, indeed, the Professor was called upon by M. HUSSON to visit a female in one of the wards of this hospital, who suffered from the symptoms of strangulated hernia, and who had in her right groin a voluminous tumor, in which M. Husson believed that he discovered a fluctuation, and which he thought to be an abscess. M. Dupuytren, being of the same opinion, opened the tumor: an enormous quantity of pus escaped, and the apparent symptoms of strangulation disappeared.

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* Dr. W. YOUNG, in *Glasgow Med. Journal.*

In the case at present under consideration, the strangulation, if it exists, is made by the neck of the sac, and the intestine must have escaped at the moment that the testicle passed through the ring, and carried with it a portion of the peritoneum forming the tunica vaginalis. After a moment's hesitation, M. Dupuytren decided upon operating, this appearing to afford the only chance of cure, and not being likely, in the event of a mistake, to aggravate the infant's state. But before he did any thing to the upper part of the tumor, he proposed to make an incision in the lower portion, opposite to the spot where he felt the fluctuation: the tumor once opened, if the intestine was found, it would not be difficult to prolong the incision, and disentangle it.

This incision was made, and gave issue to a quantity of serum: the testicle appeared bare, known by its white colour; a knot of intestine appeared above, its brownish colour contrasted with the white of the testicle, and left no doubt as to its nature. The incision was then prolonged upwards, and the whole tumor laid open: the intestine was kept down by the fingers, and the division of the stricture made with a blunt-pointed bistoury directly upwards. But here an unexpected difficulty presented itself: the infant continued to cry incessantly, and thus to contract its abdominal muscles, and it became impossible to reduce the intestine, which even escaped in greater quantity. The difficulties in reducing the intestine, the necessity of renewing the attempt several times, the small extent of the parts, and the muscular contractions of the child, rendered this operation long and painful. Before and during the operation, the child had several abundant stools.

After the operation, the fœcal evacuations became perfectly re-established; there were no longer hiccough, tension, vomiting, nor pains in the abdomen; but, whether the first dressing was made without due care, or whether the necessity of retaining the parts within the abdomen induced the operator to tighten the bandage too much at the upper part, to the neglect of the lower, we know not, but, when the dressing was removed, the testicle was found outside of the wound: the house surgeon could not replace it. It had contracted adhesions, which M. BRESCHET would have destroyed, but an erysipelas had developed itself round the wound, upon the thighs, legs, and loins. M. Breschet inquired whether straps of adhesive plaster had been applied, to which the erysipelas might well have been attributed, but they had not; and therefore it became a question to what it was owing. It appears probable that inflammation was produced by the compression of the testicle:

its appearance out of the wound, its contact with the external air, and the dressings, might have contributed to it: had that been the case, perhaps it would have been right to have destroyed these adhesions at once, and to have reduced it directly, in spite of the inflammation to which its protrusion had given birth, and which tended to support it. However this might be, leeches, emollients, and two blisters to the legs, diminished the erysipelas, and induce a hope of the fortunate termination of the case.

Case of Scrotal Hernia, attended with some peculiar circumstances.

William Cooper, æt. forty-seven, was brought to the Middlesex Hospital, at five o'clock in the morning of the 10th of February, by a surgeon who had previously attended him. He had a scrotal hernia on the right side, which, on his being placed in bed, was reduced with the greatest ease.

It was then stated that the patient had been subject to hernia for twenty years; that it had come down five years ago, and there had been some difficulty in reducing it. After that time he wore a truss, but continued the use of it for a short time only. On Thursday last (the 7th,) in the evening, his rupture again came down; he felt sick, and took a black draught, which he vomited. Next day he sent for a chemist, who made several attempts to reduce the hernia: upon his not succeeding, he confessed that he had not much experience in these cases, and left the patient. About two o'clock in the afternoon, he was seen by the surgeon who accompanied him to the hospital. This gentleman succeeded in reducing the hernia, so that the tumor disappeared, and he could even push the point of his finger into the external abdominal ring. The patient expressed himself greatly relieved after this operation. He obtained no evacuation from his bowels, however, from the time that the hernia came down until he was conveyed to the hospital. This surgeon gave him, in separate doses, to the amount of fifty grains of the compound extract of Colocynth, and sixteen grains of Calomel, and several injections by the rectum. He also bled him, soon after the operation, to twenty ounces.

When brought to the hospital, his condition showed that he was in a state of great danger. He had constant vomiting; his abdomen was swelled and tympanitic, and exquisitely tender to the touch, particularly at the lower part, on the right side; he had a small, quick, almost a fluttering pulse; his features were sunk and pallid. The house surgeon ordered him a dose of Castor-oil with Laudanum and a clyster. When visited at ten o'clock, he had had three motions, and expressed himself as being a great deal better, and quite easy. His pulse was fuller.

During the greater part of the day, he continued to feel easier than he had hitherto been. But, about six o'clock in the evening, it was found that his extremities were cold and damp; he was restless, complaining of pain in his abdomen. He died that night. It is to be remarked that the hernia came down repeatedly during the day, and was each time reduced with great facility.

Dissection.—The hernia was in the scrotum: it had come down shortly before death. Upon cutting through the abdominal muscles, the intestines rolled out from the incision, being distended with flatus. All the small intestines were highly inflamed, distended to the utmost, and in some parts loaded with dark fluid contents. The portion of gut which was included in the hernial sac was a knuckle of the intestinal ileum, very near its termination in the cœcum. Above the stricture, the intestine was of a deep red colour, marked with several patches of an inky blackness, and it was loaded with dark offensive fluid. On turning these coils aside, the lower portion of the ileum, leading from the hernia towards the cœcum, was seen small and contracted, its folds being in a mass together. These were of a pale green colour, and their surfaces were marked here and there with dark mortified spots. In the colon there was nothing to remark, except that it was contracted, and that it had not partaken of the inflammation. There was a large duplicature of the transverse arch, with a thickened mass of omentum attached to it, which appeared, from its form and the old adhesions that united it, to be the portion which had been reduced five years ago, when the rupture had come down.

EXTENSIVE SPINAL DISEASE.

A YOUNG man, twenty-six years of age, born of phthisical parents, and who lost two sisters by pulmonary disease, took to the occupation of chimney sweeper at the age of twelve, and led a drunken and irregular life, sometimes sleeping on wet straw, in barns and out-houses, summer and winter. After a night spent in this way, he experienced some stiffness in the lower extremities, accompanied by weakness. These spread to the arms; and, in the course of a year, he became affected with vertigo in the head, and tremor of the limbs. These incapacitated him for his occupation. One day he fell some yards down a chimney, and cut his head against the iron scraper; but the wound healed without much difficulty. Nevertheless, the trembling and weakness of the limbs increased very much after this accident, and he was obliged to seek refuge in an hospital. When received, he presented the following symptoms: Tremor, and even convulsions (on making any exertions), in the upper extremities; inability to stand or walk without stumbling; heat and sensibility of the surface natural; no pain in any part of the spinal column; constant sense of vertigo; no headache; chest well formed; respiration easy and deep, with the power of lying in any position; all the secretions and excretions natural; appetite good; intellectual faculties weak.

The disease was considered to be effusion into the vertebral canal, with some affection also of the head. A seton was made in the nucha, and various remedies were prescribed, which we shall not here enumerate. Moxas were also applied to the spine. A long and pretty severe course of tartar emetic, however, nearly removed the tremors and vertigo. The patient had got to the quantity of twenty-four grains of tartrite of antimony in the twenty-four hours. But the patient did not gain strength, and he left the hospital uncured.

In July 1826, he had another fall down a chimney; bruised his chest, and spat blood, with cough, pain in the thorax, and other symptoms which led the medical attendants to suspect serious mischief. A violent fever supervened, and again he entered the hospital. On examination, no disease of the lungs could be ascertained, but the heart was found pulsating in the right side of the chest. The expectoration indicated approaching phthisis, and was mixed with blood. After various vacillations, and a variety of remedies directed towards symptoms as they arose, anasarca came on, and the miserable patient sank exhausted on the 16th November, 1826.

Dissection.—There were several vesicles filled with fluid between the dura mater and pia mater: the latter membrane was every where thickened and opake; substance of the anterior lobes of the brain remarkably dense; six ounces of clear water in the ventricles; no disease of cerebellum. The spinal marrow was examined with great care. Nothing wrong appeared in its coverings. When these were slit open in front, the spinal marrow bulged out in five different places, giving the appearance of five salient points composed of whiter substance than the rest of the chord. On examining the two superior projections, the structure of the chord was found disorganised, and changed into a substance resembling thick pus. Beneath the third prominence there was found imbedded in the spinal chord a solid body, of a kidney shape, and extremely vascular. A similar substance was discovered in the fourth projection. Between these salient parts, the spinal marrow presented a natural appearance. The lungs were disorganised, partly tuberculous, partly suppurated. The heart and pericardium were unaltered.—*Medico-Chirur. Review.*

NÆVUS MATERNUS.

Case of Nævus Maternus, cured by Vaccination, at the ROYAL INFIRMARY, GLASGOW.

JANE M'GIBBON, æt. three months, had, on admission, a roundish tumor, nearly as large as a sixpence, on the right side of the chin. It was considerably elevated above the surrounding skin, had a purplish colour, and appeared to be formed of blood-vessels. At birth, the tumor was only the size of a split pea.

Around the border of the tumor, as well as all over its surface, minute punctures were made, and vaccine lymph freely applied. In ten days thereafter, the whole disease was involved in one pustule; but, when this became incrusted and was thrown off, there still remained a dark-coloured, prominent, and diseased surface. Another suppuration succeeded, and a third; when, at the end of five weeks, a complete cure was effected, no trace of the disease remaining, nor mark, further than what follows vaccination on a healthy part.

This cure was hardly completed, when another little child was presented in private practice, with a nævus advancing rapidly, and occupying the middle and edge of the upper eyelid. The same process was followed, with very similar results. A cure was effected, but after a very tedious festering and ulceration. Indeed, it appears evident that nothing further is required to effect a cure than to institute a process of suppuration, by cow-pox, by caustic, or by any thing else. As the most gentle of all these means, vaccination is entitled to a preference. But, when this has been used in the common way, and for the ordinary purpose, and before a mark of this kind has excited much attention, I am inclined to think that an antimonial plaster would constitute by far the best substitute. I am sorry that no case has as yet occurred to give me an opportunity of making the experiment.

Before these two cases fell under my care, a child was admitted into the Infirmary with a nævus about the size of a large almond, occupying the red part of the under lip. It was clipped away, not by triangular excision, but along the line of the lip. Three vessels required ligature, but in ten days the part was covered by healthy cuticle, and no disfiguration occasioned. I am satisfied that this mode should more frequently be employed in extirpating cancerous lips. I have frequently performed it successfully in extensively diseased cases. It is uniformly practised by Baron DUPUYTREN.—DR. YOUNG, *in Glasgow Journal.*

TRACHEOTOMY.

A GIRL, nine years of age, whilst laughing, suffered a bean of a large size to pass into the trachea, which excited at intervals a convulsive cough, which continually increased in violence. She was brought to the HOSPITAL at BERLIN thirty-six hours after the accident. Fits of suffocation alternated with attacks of exhaustion, and there was a severe pain beneath the upper part of the sternum, increased at each inspiration. Although it was feared that the bean had reached the bronchi, an incision, one inch in length, was made in the lower part of the trachea: the speech was immediately suppressed, and a quantity of bloody mucus escaped from the wound. This relieved the patient: nevertheless, the bean could not be discovered either by a probe or straight forceps introduced into the bronchi; trials which could not be repeated, because each time the mucous membrane was touched produced a violent attack of suffocation, attended with universal spasms. The patient was bled, had a dose of opium given to her, and a piece of gauze was placed over the wound. She had a tolerable night; but the next day the attacks of suffocation returned with such violence that her life appeared in the greatest danger. The incision was therefore prolonged nearly to the upper edge of the sternum, and again an attempt was made to pass a small pair of forceps into the bronchi, but it caused a recurrence of the spasms and a convulsive cough, during which the epidermis of the bean became visible, but which disappeared instantly, before it could be laid hold of. It again showed itself, however, and was extracted: the length was nine lines by four and a half wide. All the bad symptoms disappeared: the wound healed in about a month; the speech was restored, and nothing remained but a hoarseness.—*Medical Gazette.*

CRITICAL ANALYSES.

> Quæ laudanda forent, et quæ culpanda, vicissim
> Illa, prius, cretâ; mox hæc, carbone, *notamus.*—Persius.

A General View of the present State of Lunatics, and Lunatic Asylums, in Great Britain and Ireland, and in some other Kingdoms. By Sir Andrew Halliday, M.D. and K.H., Fellow of the Royal Society and College of Physicians of Edinburgh; Licentiate of the Royal College of Physicians of London, &c. &c.—8vo. pp. 101. T. and G. Underwood, London, 1828.

Practical Observations on Insanity, and the Treatment of the Insane; addressed particularly to those who have Relatives or Friends afflicted with Mental Derangement: also Hints on the Propriety of making the Study of Mental Disorders a necessary Adjunct to Medical Education. By W. J. late a Keeper at a Lunatic Asylum.—8vo. pp. 127. Anderson, London, 1828.

The public attention has of late been painfully directed to the subject of insanity, and the consequence is that more information has been obtained as to the condition of that unhappy class of patients in this country within these last two years, than the annals of the preceding century can afford. It may, perhaps, be said that popular prejudice has loaded with a greater share of obloquy than they deserve those establishments in which the maniac is confined, either for the purpose of security, or in the hope of obtaining a cure; but still these prejudices have been operating on the side of good feeling and right principle, and much real good has already been derived from the inquiries that Parliament has instituted.

Among the number of pamphlets that have been elicited by the interest or novelty of the subject, the two whose titles appear above were put into our hands a short time ago, and we shall devote a few pages to the consideration of their contents. Though treating of the same subject, their objects are distinct, as their title-pages announce; and we shall first introduce Sir ANDREW HALLIDAY's work to our readers' notice. It enters very slightly into the question of insanity, either in a philosophical or medical point of view, but may be consulted advantageously by those who wish to have a short account of the various lunatic asylums in England, Ireland, or on the continent, together with details as to the probable expence of maintaining such an establishment.

From the preliminary remarks upon Insanity, we extract the following passage, which describes not what was, but what we fear is too commonly the case at the present moment.

"Whether insanity proceeds from deranged organs or diseased structure, the mind, *qua* mind, is neither injured nor impaired; but not having the means of making itself known, or of giving its ideas form and utterance, except through the medium of instruments no longer fit for the purpose, we discover, in proportion to that degree of their unfitness, more or less of the phenomena that constitute madness. Through an unaccountable weakness in human nature, aided, I fear, by the representations of interested knaves, a feeling has hitherto obtained among all classes of society that a something disgraceful, nay, almost amounting to criminality, became attached to the person, and even to the family of an unhappy lunatic. The attack of the disease was, therefore, no sooner confirmed, than he was put under the charge of some heartless hireling, and hurried off to a place of concealment, where it became the interest of his keeper to have his disease made permanent. This, by seclusion or cruelty, was soon effected, when, by proper treatment, and a few soothing attentions in the bosom of his own family, it was more than probable he would speedily have recovered. And such has generally been the abandonment of friends under this affliction, that every degree of neglect and cruelty might be practised without the risk of discovery. The mystery which was made to hover round the precincts of a madhouse, was sufficient to baffle common inquiry; and the utter seclusion, so insidiously inculcated, made it next to impossible to discover the scenes of horror that took place within its walls. It would have been well for the unhappy maniac had his confinement always been entrusted to a medical practitioner, where there was some character at stake, and might be some inducement to treat him well: but in this country the law allows persons of all descriptions—men and women too, whatever may be their ignorance or incapacity,—to become the keepers of mad-houses. True it is, if they take more than one patient at a time, they must have a license for doing so; but when it is considered that the commissioners who are authorised to grant these licenses have no power to refuse them, what, I would ask, is the use of such a regulation? (P. 6.)

Our author next proceeds to relate the present state of the law respecting lunatics and lunatic asylums in England, from which it appears that, until the year 1774, no legislative enactment upon this subject existed; and this, imperfect in all its parts, and absolutely nugatory as far as the comforts of the unhappy lunatics were concerned, remained in operation until the year 1806, when a committee of the House of Commons was appointed to investigate the condition of pauper lunatics: the result of this was the passing of the Act which authorises the magistrates of the several counties to erect public asylums for their insane poor. After a lapse of seven years, this inquiry was renewed by Mr. Rose, and a Bill, founded upon the evidence then adduced, passed through the House of Commons for three or four successive years, but was uniformly rejected in the Lords. The inquiry has only been again taken up in the last session of Parliament.

Sir A. Halliday observes, that, although it is twenty years since Mr. Wynn's Act was passed, only ten asylums have been erected in the fifty-two counties of England. The number of lunatics publicly accounted for he calculates at 4782 persons; but there is, he adds, a number, if not equally great, at least nearly so, of whom the law takes no cognizance, and whose existence is only known to their relatives and friends: these are individuals placed in the care of persons who only take one patient, and who therefore have no need of a license. We leave our readers to surmise to what purposes such an unwarrantable power may be converted.

The remainder of this section is occupied with details respecting each of the county asylums; the number of patients they are capable of containing; the expenses incurred; the cost in building, and other matters worthy of notice, but which we have not the space to extract.

Our author pursues this subject with reference to these establishments in Scotland, Ireland, and the continent of Europe; from which we can only afford room for the following condensed account of the insane establishment at Antwerp. It was built twenty-five years ago, and accommodates 230 patients in separate cells, besides two infirmaries, with twenty beds in each. Each cell has its own water-closet; a stream of water runs under the building; the sexes are, of course, kept distinct, and there is a large garden and airing ground for each class. Connected with this hospital is a very singular establishment, situated at the village of Gheil, about twenty-seven miles from Antrwep, on the road to Lier and Turnhout, a place detached from other habitations, and was traditionally famous for the treatment of insanity, where the villagers were reported, in almost all cases, to have effected a cure. The founder of the present asylum caused an additional number of cottages to be built, and allotted to each a certain portion of the barren heath. These cottages were distributed to such of the community as were disposed to marry and settle, upon condition that they should receive only the convalescents from Antwerp, at a certain board, and treat them in the same manner as the other patients at Gheil: they were bound to treat these convalescents kindly, but to employ them in the cultivation of the waste lands. Here it was found that the insane recovered rapidly, and, as the fame of the villagers increased, persons of the highest rank, and even the poor, were sent to them without passing through the hospitals at all. Each patient is obliged to labour for a certain number of hours in the day, according to his strength, and, when not employed, he is allowed to walk about without restraint, and they are summoned to their homes by the bell of the village church. Scarcely any accident ever occurs, and very few ever attempt to make their escape. The author suggests the adoption of some such plan in this country.

Our readers will find also some particulars relative to the lunatic establishments in India, worthy of their attention; and in the Appendix are several documents which will be read with interest by those interested in this branch of inquiry; but we can only refer to the work itself, and now pass to a brief review of the labours of W. J.

This publication is evidently intended to be rather popular than professional, and it is written, we think, in a somewhat exaggerated style; but still it is certainly well intended, and is as evidently the fruit of much observation and experience. The author says that it was composed in the wards of a madhouse during the short spaces snatched from his duties as a keeper; and certainly there is a fund of good plain sense in many of the remarks, and many evil practices are exposed, for the truth of which we can vouch from experience.

The first chapter contains rather a verbose description of the male and female maniac: it is an evident attempt at fine writing, which the subject does not require, and is particularly unsuited to all disquisitions of a medical or philosophical nature. We therefore pass it by, and find, in the second chapter, our author asserting that the late inquiries ought not to stop at the investigation of the abuses in public asylums, and that the grievous abuses which exist in private establishments require also to be examined into, and a more efficient mode of control employed.

We perfectly agree with W. J. in the belief that numerous cases are consigned to lunatic asylums without the least necessity, and that there are hundreds of persons so incarcerated who would be much more likely to be restored to health of mind under the care of kind and considerate friends, than by being placed where every object around them must tend to excite a morbid state of feeling. (P. 9.) The following passage we give in the author's words: most of our readers will recollect a recent case in confirmation of the truth contained in it.

"It is doubtless a matter of very great convenience to many persons, that there are places to which troublesome or eccentric relatives or friends may be packed off out of the way: and it is probably at times very convenient for some people to have the management of the property of others. An unfeeling and brutal husband may exasperate a sensitive and amiable woman by his neglect and cruelty, until, with continued harassings, her mind becomes irritable and unsettled: she may be in the way on other accounts, and the husband may be anxious to get rid of her; he tells his own tale to a pliant physician, who calls to examine her, and the very questions he puts, implying doubts of her sanity, excite her to give irritable and incoherent replies, and she unconsciously seals her own doom; and the gloomy walls of a mad-house, the association with lunatics, and a strait waistcoat, soon finish the work which villany began." (P. 10.)

The remainder of this chapter is devoted to some comments upon the present mode of visiting these asylums by the commissioners under the present Act of Parliament, which visits are stated to be little more than those of courtesy: indeed, they have neither the power to remedy abuses or to refuse a license under any circumstances.

The high prices paid for the support of insane patients is next remarked upon, and some not very palatable observations made upon the tenacity with which persons who can afford to pay so handsomely are held in the grasp of their keepers.

The object of the next chapter, on *Incipient Insanity*, is to show the impropriety of consigning those in whom this dreadful malady is beginning to develope itself to the cheerless gloom of a mad-house; and our author observes of such a patient, brought up probably in the bosom of a tender and affectionate family, surrounded by the endearments of the social circle, and blessed perhaps with every comfort life can bestow,—what must be the effect on such a mind on being torn from all these ties, consigned to the society of lunatics, and to the control of strangers, whose humanity and tenderness are at any rate problematical? (P. 26.) He illustrates his position by relating instances of the ill effects of placing patients in an incipient state of insanity in contact with confirmed lunatics; but he does not dwell, we think, sufficiently upon the mischief that occasionally arises from the injudicious management of the vulgar, illiterate superintendants of these asylums; persons to whom the care of these unfortunate beings is almost entirely left, who become callous by habit, which at the same time leads them to believe that they possess some sort of indescribable knowledge of the disease, which others have not, and who are perpetually outraging the feelings and counteracting the habits of those whose sensibility and propriety of conduct they can neither appreciate nor understand. This we have seen miserably exemplified in more instances than one.

From the fifth chapter, on *Confirmed Lunacy,* we do not deem it necessary to make any extract; but, in chapter the sixth, we find our author advocating the propriety of employing a better class of people as the immediate attendants of the insane, and giving us some examples of the ill effects produced upon the unhappy patients by the substitution of force for persuasion, the usual resource of the vulgar when entrusted with power. The remedy for this does not appear to us to be sufficient to meet the evil: a mere increase of salary will never tempt a better class of persons to undertake offices of this description; but we do think that a better example on the part of the manager or superintendant (generally a female), with a proper vigilance as to this important requisite on the part of the keepers, would very much contribute to remedy the evil which our author justly complains of. Force is generally employed because, independently of the pleasure arising from supposed authority, it is falsely believed to be the quickest mode of attaining the desired end, that of obtaining the ascendancy over the patient: but the notion is a vulgar error; kindness will effect more, much more. It must be tempered with firmness; but still kindness will ever be found the surest and safest road to the confidence of the insane. A teasing, annoying, meddling line of conduct is, perhaps, as pernicious as absolute constraint and violence. In some respects, the treatment of the insane may be compared to that of the infant: you must not notice every minute deviation from a correct conduct, but whatever you do notice you must amend. If you suffer your patient to weary out your patience, and to attain a forbidden end, there is at once a period to all control and authority on your part: therefore, it behoves the attendant never to interfere unless it be necessary.

The *Hints on the Duties of Keepers,* the subject of the seventh chapter, are well deserving of the attention of those persons, and are very much in unison with what we have suggested above from our own observation.

We know not what to say to chapter ninth; the title is rather staggering to the medical man; it is as follows: *On the Necessity of the Medical Profession paying greater attention to the subject of Insanity.* W. J. seems to have formed strong opinions upon this point; perhaps he may be right. His opinion is, we fear, the result of what he has himself seen: at least, so we should be inclined to judge, from the relation of a case evidently of acute disease of the membranes of the brain, in which unquestionably the medical attendant made a sad mistake; but we would suggest that it is not quite fair to argue generally from a particular instance or two. For our own parts, we believe that the knowledge and management of mental diseases has advanced in as great a ratio as that of any other class of complaints, and that such mistakes as our author has recorded are very unlikely to occur frequently, if at all.

In the two concluding chapters, our author treats of two of the exciting causes of insanity, *drunkenness* and *masturbation.* Our author seems to think that a writ *de inebriato inquirendo* should issue whenever insanity decidedly proceeded from habitual inebriation, as the writ *de lunatico inquirendo* is when the person becomes deranged from any other cause. But we fear W. J. has not considered this subject very philosophically; for if a writ were to be issued to inquire into the habitual vices which make such inroads into the happiness of social life, we know not of whom the juries would be composed. With respect to the writ *de lunatico inquirendo,* we really think that, in almost all the cases of this kind, too much importance is attached to medical evidence. In the treatment of the insane, we willingly allow the medical man to be absolute, and to act without control or interference; but when the question is to be decided whether an individual is insane or not, the common sense of a well-appointed jury will elicit that fact from the testimony of the patient's servants, acquaintance, and friends, with quite as much certainty, and with less perplexity, than when the interested evidence of the professional witness is called for. Some recent examples of the very conflicting opinions publicly professed by eminent men in the profession, particularly devoted to this branch of inquiry, amply confirm and justify these remarks. Of the latter cause, masturbation, our author treats more at large than is usual: we believe there is much truth in what he urges upon this disgusting topic, and the hint that he throws out for the guidance of the guardians of youth are well worthy of attention. We are of opinion, however, that W. J. has a little overcharged this statement; at least we hope so, when he says that full three-fourths of all recent cases, from eighteen to thirty years of age, were insane from the effects of masturbation, and that the proportion between the male and female is nearly equal. Our own experience leads us to believe that these melancholy cases very commonly terminate in idiotcy, and are not unfrequently accompanied by epilepsy.

In conclusion, we beg to repeat that, in our opinion, W. J. has performed his task very respectably: he has told many wholesome truths, which will have the more weight as coming from the pen of one who is deeply versed in all the mysteries of lunatic establishments; and, if he has exaggerated a little, that exaggeration is all on the side of humanity and right feeling.

A Practical and Pathological Inquiry into the Sources and Effects of Derangements of the Digestive Organs, embracing Dejection, and some other Affections of the Mind. By WILLIAM COOKE, Member of the Royal College of Surgeons, Secretary to the Hunterian Society, Editor of an Abridgment of Morgagni, &c. &c.—8vo. pp. 290. Longman and Co. London, 1828.

NOTWITHSTANDING the many volumes that have issued from the press upon the subjects which Mr. COOKE has selected, he is inclined to believe "there is yet ample room for other labourers, who may, at least, assist in the process without following the beaten track, or wasting time in idle discussions." We agree with him. Every observant practitioner, with the advantage of experience, may yet add to the information we possess respecting the ever-varying diseases of the digestive organs. But, as fashion bears some sway in the treatment of disease, as well as in the adornment of the person, one caution may be thrown out without impropriety. Let us be careful that, in our zeal to keep the stomach and bowels in proper order, we do not too hastily conclude that they are the original offenders, and thus neglect diseases of other parts with which the digestive organs so frequently sympathise.

"Incalculable good has resulted from directing attention to the influence of derangements of the digestive organs in producing various chronic affections, but this doctrine has been so extensively promulgated, and is now so prevalent, that the opposite truth has been somewhat overlooked. That the functions of the abdominal viscera are disturbed by injuries of the head, and by emotion of mind, are facts too common and too prominent to escape observation: but the effects of idiopathic disease in the head, or in any other viscus; or of continued pain in any part of the body; or of general debility, on the nervous system and functions of the organs in question, though not less certain, are liable to be disregarded when the mind is strongly imbued with the notion of their priority in suffering." (*Preface*, p. ii.)

"The various sources of dyspeptic symptoms" have been too frequently pointed out, and we believe are too generally understood, to require, upon the present occasion, a very lengthened notice. Congestion or chronic inflammation of the mucous membrane is not unfrequently productive of symptoms resembling those which arise from simple dyspepsia. "These affections may usually be distinguished by attentive inquiry into the history of the disease, by a careful investigation of the patient's sufferings, and by the effect of the means employed; and, undoubtedly, it is of the highest importance that they should be distinguished." (P. 4.)

In some cases, inflammation of the mucous membranes may proceed on insidiously even to ulceration, and escape detection without much attention.

"In the treatment of those diseases which arise from an inflamed state of the mucous membrane, bleeding by leeches or cupping will be one of the most available remedies; and in cases of mere congestion it may be necessary to effect a local abstraction of blood, though not generally to the same extent as in inflammation. Mercurials, when administered before depletion, I believe, are generally injurious, and even then will require to be given in the mildest forms and smallest doses." (P. 6.)

If purgatives are required in such cases, the mildest should be employed. Irritating purgatives should be avoided, as they tend to keep up the excitement in the "muciparous" texture. In one case of chronic diarrhœa, where there was reason to suppose the membrane was in the state adverted to, the author used the Sulphas Cupri, as recommended by Dr. Elliotson, with great advantage.

Under the head of *Hemorrhage from the Alimentary Canal*, an interesting case of hæmatemesis is related, but in too detailed a manner to enable us to abstract it. Although vomiting of blood, particularly when it occurs in young females, and is vicarious of suppressed menstruation, is rarely a dangerous disease, unless the general powers of the constitution are broken down by a great and long-continued discharge of blood; it occasionally happens that such cases terminate fatally. We have seen two cases, in both of which a favorable prognosis was given in consultation, and in both the patients suddenly threw up a large quantity of blood from the stomach, and quickly expired. We should therefore give a guarded opinion, even if the patient appears to be relieved of the previous symptoms of oppression at the præcordia, &c. by the discharge from the stomach. We believe we are indebted to BICHAT for the true pathology of such cases. Until his time it was generally imagined that the blood was thrown forth from some ruptured blood-vessel. He considered it to be hemorrhage from the exhalant vessels of the whole or a great part of the stomach and intestines, and his opinion was verified by dissection. In the two cases we have referred to, the internal lining of the stomach and intestines was soft, red, and pulpy, and thickly studded with minute red points. It appeared as if the membrane had been destroyed by a chemical caustic. Hæmatemesis may, however, sometimes arise from the rupture of a particular vessel.

Gastritis and Diaphragmitis from Medicine.—Though the stomach is capable of great resistance in health, there are states of constitution, and conditions of the organ itself, which render it extremely susceptible of irritation and inflammation. In treating subjects of this kind, great caution will therefore be necessary. A case in illustration is very minutely described. The patient was a weak, nervous, dyspeptic woman, but with a cheerful mind. She had lived beyond her income of health, by too close an attention to the duties of tuition. She had found relief from bluepill and hyosciamus, gentle aperients, and bitter infusion. Contrary to the opinion of Mr. Cooke, a stimulating medicine was determined upon in consultation, consisting of a drachm of Sp. Ammon. accompanied with Inf. Cuspariæ. Inflammation of the throat, pain and soreness in the chest, were produced, together with inflammatory action in the mucous lining of the œsophagus. Bleeding and antiphlogistic means were now required, and the patient gradually recovered from these symptoms, although she shortly afterwards fell a victim to an accumulation of disease.

In persons whose nervous system is easily deranged, we should, therefore, be very careful to adapt our treatment to their particular temperament.

Cases are given in which the common symptoms of dyspepsia were produced by chronic inflammation of the peritoneum, and from renal irritation, in which the real source of suffering was very insidious in its progress.

Influence of the Brain on the Digestive Organs.—When disease manifests itself in the head and abdominal viscera almost simultaneously, the affection of the former, in the present day, is usually attributed to some derangement of the latter. Two cases are related in which some ambiguity existed, and which strongly point out the necessity of not too hastily regarding the stomach as the original seat of ailment.

Mr. Cooke makes many good practical observations upon diseases of the pancreas, spleen, and liver; and illustrates his opinions by instances of each disease which have occurred in his practice.

Influence of the Nervous System and the Mind on the Digestive Organs.—The experiments and practical suggestions of CHARLES BELL, MAGENDIE, WILSON PHILIP, and others, are briefly referred to, for the purpose of showing the intimate connexion which exists between the nervous system and the stomach. The various effects which in different persons are produced upon the digestive organs, and the constitution in general, by mental affections, are also briefly touched upon. Having commented upon the various sources of derangement in the organs concerned in digestion, it is very properly insisted upon that no definite mode of treatment can be laid down.

"To rely on the same medicines, to prescribe the same diet, to establish the same intervals of taking food, to enjoin the same exercises, is nothing else than empiricism. Even if we admit that the effect of the various causes may be alike, surely there must be some reference in the treatment to the cause itself, and likewise to the constitution. Sometimes bleeding will be requisite; sometimes active purging; sometimes perseverance in the mildest doses of mercurial remedies; sometimes bitters or tonics. At all times the diet must be most carefully regulated, but we should bear in mind that there are persons who cannot undergo very long intervals between the seasons of taking nourishment without being distressed, and this is particularly the case with children. I do not advocate a system of repletion, nor the ridiculous practices of parents who allow their children to be almost constantly eating; yet the digestion of children is generally more rapid than that of adults; and how often do we see some children in a school, or family, who cannot endure the same interval as their companions, but in attempting it are reduced to a state of extreme irritability and languor. . . . . . .

"With respect to the administration of purgatives, there are three points to which I shall just advert. There will sometimes be fatal accumulation of fæces in the intestines, when both the patient and attendants report that the bowels are freely relieved. When the obstruction arises from a mechanical cause, as hernia or contraction, great caution is necessary in the administration of purgatives. Purgatives are not unfrequently persevered in to remedy unhealthy secretions, pain, tenderness, and flatulence, solely kept up by the means employed.

"In cases of constipation we must be careful that the discharge of a loose motion does not deceive us, for this may happen without the bowels being sufficiently acted upon. We ought never to be satisfied in any serious case without careful examination with the hand, for it will frequently happen, even after fluid dejections, that a large accumulation of fæces shall exist." (P. 128.)

Mr. Cooke ventures to submit, and we believe with much propriety, that Mr. ABERNETHY has circumscribed his principles too much. We know there are many respectable writers who have denied that calomel will produce green and slimy stools. They look upon evacuations of this kind as a proof of the necessity for the further and more free use of mercurial medicines. We have no doubt that "those practitioners who redouble their forces when these appearances are detected, aggravate the symptoms they intend to allay." In the treatment of the diseases of children this error is by no means uncommon.

In the second part of the volume the author treats *on the Effects produced upon remote Parts of the Body, and upon the Mind, by Derangement of the Digestive Organs.* Numerous cases are detailed of derangement and organic disease of various parts, from an unhealthy condition of the stomach and bowels.

Mr. Cooke's work is entirely practical, and will not be consulted without advantage. From the many cases he has related, it is evident he must have extensive experience, although, if they had been less minutely detailed, the perusal of the book would certainly have been more agreeable and not less instructive.

A Disquisition on the Nature and Properties of Living Animals; with an Inquiry how far our Knowledge of Anatomy and Physiology is consistent with the Belief of a Soul and a future Life, and on the Intellectual Difference between Man and Brutes. By GEORGE WARREN, Surgeon.—8vo. pp. 144. Longman and Co. London, 1828.

As, in our opinion, physicians are not called upon to abstract their minds from their more important duties, by entering the field of metaphysical disquisition, we should have passed over the present work altogether had it been entirely confined to such speculations. We would prefer being accused of mental cowardice or inefficiency by evading a subject, which, "settled oft, remains unsettled still," rather than encourage our readers to waste their time and talent by entering upon a theme which must be unprofitable to them as practical men, although it may flatter the vanity of a subtle disputant to show that he can still say something upon a subject about which so much already has been said. But he is really wise who feels and confesses that there are limits to human reason —that Nature has surrounded man with certain boundaries, beyond which he cannot hope to advance either with success or safety.

Mr. WARREN has dedicated his first chapter to a brief account of the present state of our knowledge upon the subject of life. He gives us extracts from the works of LAWRENCE and Sir CHARLES MORGAN, which have been already frequently canvassed. We agree with him that the subject has been one of deep interest,—we would add, of fruitless investigation, " the philosopher's better system."

Professed writers upon animal being may be divided into three classes. The merit of each consists rather in confuting, or at least confounding, the opinions of others, than in establishing their own hypothesis. One class contend that a living principle, having an existence independent of the physical body, and endued with those faculties which constitute the mind, and being of an indestructible nature, is the life-giving principle to the animal. Another class refer every property of the living animal to organization: they deem it useless to seek for any other explanation. The third class maintain, upon moral and metaphysical grounds, that some other principle, of which their conception is very imperfect and their ideas confused, must also exist in union with matter, to explain the phenomena of mind, and to render the tenets of their faith of possible accomplishment.

" This being the present state of knowledge, it unfortunately results that he whose attention and study have been directed to the attainment of skill in the cure of diseases, has been driven, by the imperfection of science, to the necessity either of regarding animal existence in an entirely physical point of view, or of admitting the existence of some other principle than matter, with which no connexion with the organic operations could be discovered. The first admission might be the basis of science to the exclusion of any rational ground for moral principles: the latter might be the basis of moral principle to the exclusion of science. To one of these formidable results either opinion must lead, unless man can so command his thinking powers as to regard the same body in two opposite views at the same time.. It is not meant by this to deny that many men, eminent in medical and surgical science, and in the practice of piety and morality, have regarded man both as a moral agent and as a physical body; but they have always been compelled to pursue in argument opposite lines of reasoning, in support of these opposed notions. And no person has ever traced any satisfactory connexion between man as a moral agent and a physical being. What connexion has ever been shown between him as a physical being and mind, has a tendency to deny his moral agency, and to make him the creature of physical necessity." (P. 14.)

Having glanced at the present state of our knowledge upon the subject, the author proceeds to investigate the nature of a living animal, and then goes on to inquire into the uses of the different organs and functions of the body, and their subserviency to life, in which he expounds and illustrates some new views, which he trusts also he satisfactorily proves.

The second chapter is entirely metaphysical, and those who have a taste for such speculations will discover in it many proofs of ingenious reasoning and mental acumen. Having shown the existence of the faculties of the soul, which must be admitted by all, whether materialists or not, Mr. Warren gives us *his* definition of life; and, as the mere attempt is one upon which every writer piques himself, we shall give his own words:

"The usual definition of life is, that 'it is the sum total of its functions.' This definition, whatever knowledge it at first appears to convey, is a mere waiving of the matter, as it may be asserted of every thing or being that it is the sum total of its qualities. My definition of life, a conclusion founded upon physiological opinions hereafter to be advanced, and to be maintained upon grounds hereafter to be jealously and suspiciously scrutinised, is, that it is a relation between an anima, or soul, and the natural laws of this material world. And the proper understanding of the mode in which this relation is accomplished, with a knowledge of the uses of the different parts of the body in effecting this, constitutes the science called physiology; a most important, and in practical medicine the most useful, branch of the science of life." (P. 34.)

Having hinted at the desponding temper of mind with which we approach such subjects, it will not be expected that we should enter upon a discussion from which we expect no conclusive result. We are bound, however, to consider every opinion offered us with attention, and to reflect upon it maturely in proportion to the difficulty with which it is surrounded. We have weighed well the arguments adduced in support of this definition, and we confess candidly that we cannot perceive any very conclusive argument, although we have frequent occasion to admire the ability and temperance with which Mr. Warren argues a point that has not seldom given rise to much unphilosophical acrimony of disputation.

We cannot enter into a detailed consideration of the train of reasoning which occupies many succeeding pages. The conclusions the author hopes he has established are—

"That in every living animal there are certain faculties or attributes to which, when considered abstractedly, may be appropriated the term 'anima' or 'soul;' that life consists of a relation between such attributes and the physical laws of the material world; that the body is the medium or instrument by which such relation is accomplished; that sensibility, muscular contractility, the organic movements, and animal combinations, depend upon the agency of electric fluid; that the ulterior use of food-taking is the supply of electric fluid; that the rapid circulation in animals is always in accordance with their degree of sensibility; that in the operation between the arterial and nervous systems, as well as in muscular contraction and organic movements, heat is evolved; and that the use of the lungs is to cool the body." (P. 86.)

In the eighth chapter we find some ingenious pathological opinions, in illustration of the author's belief of the existence of an electric principle in the living animal, and of its being the identical agent by which the properties of animals are maintained. HUNTER and ABERNETHY have anticipated Mr. Warren in many of his observations and illustrations upon the influence which electricity exerts upon living animals. He goes, however, a step further than they have done. Mr. Abernethy expressly states "that he does not mean to affirm that electricity is life." But, if it be conceded to Mr. Warren "that the electric fluid is the *identical* agent by which the properties of animals are maintained," electricity and life must be considered as synonymous terms.

We are happy to find Mr. Warren a determined, yet temperate, opponent of the doctrines of materialism. In the last chapter, the author takes a slight comparative view of the brute and human soul. He argues that it is not unscriptural to admit a soul in all living animals, although it appears that there exists "a vast difference between the anima or soul of man, and the anima or soul of brutes; and it is evident that the soul of man is naturally, and philosophically, and peculiarly adapted for those higher contemplations and sublime hopes which religion upholds to his race."

They who have time and inclination to enter upon abstract and metaphysical questions may find some gratification in the perusal of Mr. Warren's book. The practical subjects which are touched upon are too briefly dismissed to arrest the attention of those who are more ambitious of making themselves thoroughly acquainted with the useful parts of their profession, than of distinguishing themselves as metaphysical disputants.

It would be unfair to dismiss the volume before us, without doing the author the justice of declaring that he evidently possesses considerable powers of reasoning, and very extensive information.

Peripneumony; being the third Part of a Treatise on the Diseases of the Chest and on Mediate Auscultation. By R. T. H. LAENNEC, M.D. Regius Professor of Medicine in the College of France, &c. (Continued.)

LAENNEC, with most modern authors, limits the application of this term to inflammation of the pulmonary substance, and divides the disease into five varieties: 1. Acute Peripneumony; 2. Partial Peripneumony and Pulmonary Abscess; 3. Gangrene of the Lungs; 4. Chronic Peripneumony; 5. Latent and Symptomatic Peripneumony. The *acute peripneumony* presents three stages or degrees: viz. *obstruction, hepatization,* and *purulent infiltration.* In the first of these the lung is externally of a livid or violet colour, more solid and heavier than natural, retaining the impressions of the fingers nearly like an œdematous limb. When cut, it is found to be injected with a frothy serous fluid; but, except in some portions where its obstruction is more solid, we can still clearly discover the natural spongy texture of the viscus.

In the second stage *(hepatization)*, the lung no longer feels in any degree crepitous, but, as the name implies, resembles liver. The lungs frequently look less livid externally in this than in the preceding stage; but internally they are of a more or less deep red, forming a striking contrast with the bronchial tubes, blood-vessels, and their cellular partitions running through them. When the incised surfaces are exposed to the light in a certain direction, the pulmonary substance is perceived to have lost its cellular appearance, and presents a *granular* aspect, which our author looks upon as the "distinguishing anatomical character of inflammation of the lungs." This granular appearance becomes still more obvious when we *tear* a portion of the hepatised lung. When a lung is hepatised throughout, it appears at first sight more bulky than natural: this is occasioned merely by the lung not contracting as in the sound state. M. Laennec states that he has frequently measured the chest in cases of peripneumony, without being able to discover any dilatation of the affected side.

In the third stage, or that in which there is purulent infiltration, the substance of the lungs has some degree of hardness and the granular appearance above described, but is of a yellowish colour; the pus at first appearing in small points, which gradually combine, and the whole lung finally assumes a uniform straw or brown colour, and, when cut into, exudes a yellow, opaque, viscid matter, evidently purulent.

The three preceding stages are frequently united in various ways.

"Sometimes one lung is inflamed in the third degree through its whole extent, while the other contains only some portions affected in the first or second degree. Frequently the three degrees are found in the same lung, dividing it into as many zones, strongly contrasted, or gradually and insensibly shading one into another. The transition of one stage into another is marked by the occurrence of some points of the more advanced degree amidst a part which is only affected in the inferior degree: in this way, the transition from the first to the second stage is indicated by a red tissue, containing much frothy and bloody serosity, but still crepitous, intermixed with which are some portions of a redder colour, much more solid, not at all crepitous, containing less fluid, and granular when incised. Sometimes these indurated portions are exactly circumscribed by a pulmonary lobule; and, in children more especially, we sometimes even find dispersed, in the centre of the lungs, a certain number of lobules arrived at the stage of hepatization, while those immediately surrounding them are perfectly sound. This variety of peripneumony has in some recent works been denominated *lobular*. In these cases we may consider the inflammation as having commenced in several distinct points at the same time, and, being interrupted in its course by the treatment or some other cause, has not extended to the rest of the lung, or, having extended to it in a slight degree, has terminated in resolution before death. We may convince ourselves of the correctness of this opinion by examining different lungs in different stages of resolution from inflammation. The transition from the second to the third stage is marked by the existence of yellowish, irregular, uncircumscribed spots, amid a portion of lung inflamed in the second degree, the one colour passing insensibly into the other. It is this state of lung which, by the union of the two colours mentioned with the black or grey stripes produced by the black pulmonary matter, presents an appearance extremely like a piece of granite composed of red and yellow felspar, grey quartz, and black mica.

"The lower parts of the lungs are those most commonly occupied by peripneumony; and, when the disease involves the whole viscus, it is almost always in the inferior part that it commences.

When the three degrees of inflammation exist in different parts of the same lung, the site of the more advanced stage is usually in the same inferior portion. It is much more uncommon to find the inflammation confined to the upper lobe. It is not so unusual, however, to find a part of the centre of the lung inflamed, while the superficial portion is in a sound state. We never find the whole of both lungs inflamed in the third, or even second degree; and this for obvious reasons; since an obstruction of this kind could not take place instantaneously, and must render respiration quite impossible. But it is by no means uncommon to meet with cases in which one whole lung, and more than half the other, are quite impervious to air. On the other hand, we find death take place before the obstruction has reached the fourth part of the organs of respiration; a fact which, as well as many others, proves that death is frequently occasioned much more by the exhaustion of the vital principle than by the extent or intensity of the organic alteration. The right lung is more frequently affected than the left, not only in cases of pneumonia, but in almost all the other morbid affections to which these organs are subject. This fact has been long noticed by practitioners and medical writers, and is noticed among others by Morgagni." (P. 198.)

Abscess.—A real collection of pus in the substance of the lungs is very uncommon; our author not having met with it more than five or six times among several hundred dissections. This is very different from the statements of other pathologists, especially in this country, and is to be accounted for by the different meaning attached to the word abscess.

Treatment of Peripneumony.—The treatment of every disease is undoubtedly the most important part of its history, and we therefore pass by the "signs and symptoms" of peripneumony to arrive at this part of the subject. Laennec justly observes that, from the time of Hippocrates to the present day, BLOOD-LETTING has been looked upon as the great remedy in inflammation of the lungs. But, while this general principle has been admitted, the same uniformity has not prevailed with regard to the extent to which it ought to be carried, the period of the disease in which it is most advantageous, and other minor circumstances. Formerly the practice was to bleed but once, viz. at the onset of the disease, and until syncope was produced. This method our author says is still frequently adopted in England: a statement, however, not strictly correct, because, although we frequently bleed *ad deliquium*, we do not content ourselves with one blood-letting; unless, indeed, in those rare cases in which the first evacuation cuts short the inflammation. The extent to which the abstraction of blood may be carried at once varies in almost every patient: perhaps twenty-four ounces may be about the average; but the intelligent translator of the work before us mentions that he has known a man bled in an attack of fever to eighty-four ounces at once, "without suffering syncope, or any ill effect, except great disorder of the circulation for some hours afterwards:" a very remarkable fact certainly, and a practice by no means to be copied. Except that our author rather underrates both the actual and proper extent of the blood-letting, the following remarks are apposite:

"The practice most commonly followed at present over the whole of Europe is, in the beginning of the disease, to bleed to the extent of from eight to sixteen ounces, and to repeat the operation daily, and sometimes even twice a day, if the inflammatory symptoms do not give way, or if, after being subdued for a few hours, they return with fresh violence. After the first five or six days, the bleedings are repeated after longer intervals, and soon cease altogether, except in cases where they are strongly indicated by the renewed strength of the pulse, oppression, and fever. Much importance was formerly attached to the particular vein to be opened, the preference being given to that of the affected side. At present this is almost universally acknowledged to be a matter of complete indifference.

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"In all these cases, and indeed in every case whatsoever, the more feeble the pulse is, the less indication is there for venesection. At the same time, it is well known to every practitioner that this feebleness is sometimes only apparent, and that bleeding will render the pulse both stronger and fuller. To discriminate the false from the real feebleness of pulse, requires the tact of an experienced practitioner; and, unfortunately, the most expert are in this often deceived. In cases of this kind, the use of the stethoscope will tend greatly to remove our doubts, as will be seen when we come to treat of the exploration of the heart's action. At present I shall only observe, that, whenever the pulsations of the heart are (proportionally) much stronger than those of the arteries, we may bleed without fear, and with the certainty of finding the pulse rise; but that, if the heart and pulse are both weak, the detraction of blood will almost always occasion complete prostration of strength. I have, nevertheless, observed in some cases, but very rarely, that a small bleeding, even in such circumstances, has succeeded in restoring the energy of the circulation; and this has been when the debility depended on cerebral congestion." (P. 241, &c.)

Blisters, and other counter-irritants, hold but a low rank in the estimation of our author; at least, in the acute stages of the disease.

Evacuants.—Laennec confines himself to keeping the bowels open by means of clysters and gentle laxatives.

Tonics.—We have never seen inflammation of the lungs, properly so called, in which tonics were admissible; but, when the inflammation has ended in suppuration or gangrene, or those sloughing abscesses which are more frequent than the latter, we can easily imagine those remedies of service. Laennec observes of tonics—

> "These, and especially bark, are often very useful in the peripneumonies of old persons and debilitated and cachectic subjects, especially towards the termination of the disease, when, after the suppurative stage, the fever passes off, and resolution goes on very slowly. In the same circumstances the ancients recommended wine; a practice which I have myself sometimes followed with success. We sometimes even meet with epidemic peripneumonies in which blood-letting is constantly hurtful, and the bark beneficial in every stage of the disease. This fact, which cannot be denied, was frequently witnessed, particularly in Germany, towards the close of the last century; and there is no doubt that Brown's theory was indebted to this medical constitution for a portion of the fame it obtained in that country. Numerous examples of the same kind are recorded in the old Journal de Medicine; and I have myself met with many, particularly in the epidemic among the troops in 1814, already mentioned. In gangrene of the lungs, cinchona is the best remedy. I have used it successfully, even in cases where the hepatization around the eschar was very extensive; and have sometimes even combined wine and opium with it, when the violence of the inflammatory symptoms had begun to subside. To be effectual it must be given to the extent of an ounce of the powder, or an equivalent portion of the extract, daily. In several cases I have continued to give the sulphate of quinine for more than a month, to the extent of eighteen grains in the twenty-four hours." (P. 246.)

Tartar Emetic.—The most interesting part of Laennec's observations relate to his experience with this remedy: he thus describes his mode of using it, and the results:

> "As soon as I recognise the existence of the pneumonia, if the patient is in a state to bear venesection, I direct from eight to sixteen ounces of blood to be taken from the arm. I very rarely repeat the bleeding, except in the case of patients affected with disease of the heart, or threatened with apoplexy, or some other internal congestion. More than once I have even effected very rapid cures of intense peripneumonies without bleeding at all; but, in common, I do not think it right to deprive myself of a means so powerful as venesection, except in cachectic or debilitated subjects. In this respect M. Rasori does the same. I regard blood-letting as a means of allaying for a time the violence of the inflammatory action, and giving time for the emetic tartar to act. Immediately after bleeding I give one grain of the tartar emetic, dissolved in two ounces and a half of cold weak infusion of orange

leaf, sweetened with half an ounce of syrup of marsh-mallows or orange-flowers; and this I repeat every second hour for six times; after which I leave the patient quiet for seven or eight hours, if the symptoms are not urgent, or if he experiences any inclination to sleep. But if the pneumonia has already made progress, or if the oppression is great, or the head affected, or if both lungs or one whole lung is attacked, I continue the medicine uninterruptedly, in the same dose and after the same intervals, until there is an amendment, not only in the symptoms, but indicated also by the stethoscopic signs. Sometimes even, particularly when most of the above-mentioned unfavorable symptoms are combined, I increase the dose of the tartar emetic to a grain and a half, two grains, or even two grains and a half, without increasing the quantity of the vehicle. Many patients bear the medicine without being either vomited or purged. Others, and indeed the greater number, vomit twice or thrice, and have five or six stools the first day; on the following days they have only slight evacuations, and often indeed have none at all. When once tolerance of the medicine (to use the expression of Rasori) is established, it even very frequently happens that the patients are so much constipated as to require clysters to open the body. When the evacuations are continued to the second day, or when there is reason to fear on the first that the medicine will be borne with difficulty, I add to the six doses, to be taken in twenty-four hours, one or two ounces of the syrup of poppies. This combination is in opposition to the theoretical notions of Rasori and Tommasini, but has been proved to me by experience to be very useful. In general, the effect of tartar emetic is never more rapid or more efficient than when it gives rise to no evacuation: sometimes, however, its salutary operation is accompanied by a general perspiration. Although copious purging and frequent vomiting are by no means desirable, on account of the debility and the hurtful irritation of the intestinal canal which they may occasion, I have obtained remarkable cures in cases in which such evacuations had been very copious. I have met with very few cases of pneumonia where the patient could not bear the emetic tartar; and the few I have met with occurred in my earliest trials; insomuch that this result now appears to me to be attributable rather to the inexperience and want of confidence of the physician, than to the practice. I now frequently find that a patient who bears only moderately six grains with the syrup of poppies, will bear nine perfectly well on the following day. At the end of twenty-four or forty-eight hours at most, frequently even after two or three hours, we perceive a marked improvement in all the symptoms. And sometimes even we find patients, who seemed doomed to certain death, out of all danger after the lapse of a few hours only, without having ever experienced any crisis, any evacuation, or indeed any other obvious change but the rapid and progressive amelioration of all the symptoms. In such cases the stethoscope at once accounts for the sudden improvement, by exhibiting to us all the signs of the resolution of the inflammation. These striking results may be obtained at any stage of the disease, even after a great portion of the lung has undergone the purulent infiltration. As soon as we have obtained some amelioration, although but slight, we may be assured that the continuation of the remedy will effect complete resolution of the disease, without any fresh relapse; and it is in regard to this point more particularly that the greatest practical difference between the emetic tartar and blood-letting consists. By the latter measure, we almost always obtain a diminution of the fever, of the oppression and the bloody expectoration, so as to leave both the patient and the attendants to believe that recovery is about to take place: after a few hours, however, the unfavorable symptoms return with fresh vigor; and the same scene is renewed, often five or six times, after as many successive venesections. On the other hand, I can state that I have never witnessed these renewed attacks under the use of the tartar emetic. In these cases we observe only, in the progress towards convalescence, occasional stoppages. And this is more particularly the case in respect of the stethoscopic signs; as we find that, between the period when the patient experiences a return of his appetite and strength, and fancies himself quite cured, and the period at which the stethoscope ceases to give any indication of pulmonary engorgement, more time frequently elapses than between the invasion of the disease and the beginning of the convalescence. It is necessary to observe, however, that this remark is still more frequently applicable to the disease when treated by blood-letting; and, moreover, that the patients subjected to the antimonial method never experience the long and excessive debility which too often accompanies the convalescence of those who had been treated by repeated venesections.

"The best way of appreciating any particular mode of treatment is by its results. I am sorry to say that I only began last year to keep an exact account of the results of mine by the tartar emetic; but I can affirm that I have no recollection of death from acute pneumonia in any case where this medicine had been taken long enough for its effects to be experienced. I have only witnessed a few fatal terminations where the case was a slight peripneumony complicated with severe pleurisy. (We shall find, when we come to treat of the latter disease, that, after the first stage, the emetic tartar has little effect in it.) I have also lost some patients who, besides the pneumonia, were affected with cancer, phthisis, disease of the heart, &c.; and these are the cases where I had an opportunity of observing the different degrees of resolution in this disease. Finally, I have lost some who were brought to the hospital moribund, and who sunk before they had taken more than two or three grains of the remedy. In the year 1824, at the clinic of the Faculty of Medicine, I treated by the tartar emetic twenty-eight cases of pneumonia, either simple or complicated with slight pleuritic effusion. Most of these cases were very severe, yet they were all cured, with the single exception of a cachectic old man of seventy, who took but little of the medicine, because he bore it badly. During the present year (1825) I have treated thirty-four cases in the same manner. Of these, five died: but of this number two women, one aged fifty-nine and the other sixty-nine, were brought to the hospital moribund, and sunk before they had taken more than two or three doses of the emetic tartar; a third died of disease of the heart when convalescent from the pneumonia; and a fourth fell a victim to chronic pleurisy, also in the period of resolution of a sub-acute peripneumony. These two last cases will be detailed hereafter; the one at the end of the present chapter, the other in the section on Pleuro-pneumonia. The fifth case was that of a man, seventy-two years of age, who died of cerebral congestion on the tenth day of the disease. Of these five cases, then, the two first cannot be adduced in either way as instances of the effect of this remedy; and the two next are proofs of its efficacy in pneumonia, rather than the contrary. The result, therefore, of the whole is, that of fifty-seven cases of pneumonia treated by the tartar emetic, only two individuals, both upwards of seventy, died of this disease conjoined with cerebral congestion; that is, a little less than one in twenty-eight." (P. 250.)

Report made by the Faculty of Medicine of Paris, in answer to an Application from the Prefect of Police, respecting the presumed Violation of a Child of Fourteen Months old. (*Repertoire d'Anatomie*, tome iv. No. 4.)*

THE question submitted to the decision of the Faculté de Médecine by the legal authorities was, whether it was possible that an infant of such an age could have been violated. Their opinion was also requested upon the facts stated by a pupil of the Hôpital Beaujon, who reported that "the hymen was torn, and that it appeared to have been recently ruptured." As, in a legal point of view, any forcible attempt to perpetrate such a crime is as criminal as its consummation, the Faculty confined themselves to one point of inquiry, namely, to ascertain whether the appearances of the organs of generation justified the suspicion that violence had been inflicted. The certificate of the surgeon who first examined the infant stated that the hymen was ruptured, that the rupture *appeared* to be recent, and that the labia *appeared* to be inflamed. The commissioners observe, that every year, particularly during cold and damp weather, female infants are taken to the hospital with a purulent, and sometimes bloody, discharge from the vagina, accompanied by tumefaction of the parts, ecchymosis of the labia, and "solution de continuité de l'hymen." The children in this state are usually feverish, and out of health in other respects. Many of these little patients have been presented at the consultations under the impression that some improper violence had been inflicted. But a variety of circumstances tended to prove that there was no foundation for such suspicions. Several of the infants were still at the breast, and had never been left by their mothers; and the number of such cases appeared to prove the existence of some general cause which had acted simultaneously upon many different children.

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* This article was intended for the COLLECTANEA; by a mistake of the printer it has been introduced here.

In reference to the facts stated in the certificate, it was observed, that the hymen may be ruptured in many different ways, and that it cannot be determined by any examination *how* the rupture has been caused. The inflammatory symptoms, ecchymosis of the labia, and discharge from the vagina, cannot, without some collateral evidence, be asserted to arise from any criminal attempt. The report from the Faculté de Médecine, therefore, merely certified that the child laboured under a "catarrh" of the external genital organs. They did not venture to give any opinion as to the cause of the complaint.

In more than one instance we have known much anxiety excited by the appearance of symptoms in young female children, resembling mild gonorrhœa. The brief relation of a case which occurred a short time ago in our own practice, will show the necessity for much caution on the part of the practitioner. A girl, nine years of age, was attacked with the symptoms above enumerated: discharge from the vagina, swelling of the labia, and inflammation of the parts. In this state she was presented to a very young surgeon, who injudiciously declared that the child must have been the subject of some improper violence. She was repeatedly and severely questioned by her mother, and at length an accusation was extorted from her against a young man residing in the same house. He fortunately, however, was known to have been absent on the particular days mentioned by the child. Being still urged by her mother, she afterwards told the same story of two or three other men; and, when we questioned her upon the subject, she confessed that no part of her story was true, but that she believed her mother "wanted her to find out somebody."

We were consulted in a similar case some years ago, in which a criminal prosecution was about to be commenced against a man upon very slender suspicion. In this instance the child had afterwards frequent attacks of the same kind at very distant intervals. Cooling lotions and mild aperients have always succeeded in removing the inflammation and discharge.

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

ANATOMY.

Observations on the Dissecting and Preparing of the Bodies of Animals. By Professor CARUS. (From his *Introduction to Comparative Anatomy*, translated by GORE, vol. ii. p. 389.)

Though the art of anatomising the bodies of animals is essentially the same as that practised upon the body of man, and though want of space precludes me from treating the subject minutely, I conceive that a few remarks may not be altogether unacceptable to those who feel desirous of pursuing such studies for themselves.

The first thing that I have to observe is, that all dissections of small and soft objects, *e. g.* worms, zoophytes, insects, mollusca, and embryos, where it is desirable to obtain even tolerably accurate results, should be performed *under water*, by which the parts are kept floating and separated from each other, and consequently present themselves more distinctly. A very simple contrivance for investigations of this kind may be prepared in the following manner:—A mass of tough wax (not too soft) is to be laid upon one or more porcelain saucers or capsules of different sizes, which are then to be put in a warm place until the wax melts so as to cover the surface evenly to the depth of a half or one-third of an inch. If the object to be examined be laid upon this surface, it may be fixed by needles in any position that is wished, and, when covered with clear water, developed and dissected by means of suitable instruments. Of them, the best are very delicate forceps; pointed, well made, sharp-cutting scissars; and small knives like cataract needles, some round, others with cutting edges, and fixed in slender wooden handles. For separating parts, I have also employed small horn probes and fine brushes; whilst, for examining them, a good magnifying glass is frequently indispensable. If it is wished to preserve a preparation thus made, wax, coloured at pleasure as for the purpose of injections, is to be formed into little tablets about one-fourth of an inch thick: one of these is then to be placed upon the saucer or capsule containing the preparation; the latter may then be transferred to it, arranged suitably upon it, fixed there by means of short needles, and both together then placed in alcohol. Nor must I forget to mention that the examination of very delicate organizations may frequently be conducted with greater facility and accuracy, if the object be previously allowed to remain some time in spirits, and thereby to become harder and contracted. This applies particularly to the dissection of nervous organs, and to the examination of very small embryos, of mollusca, and worms.

There are various modes of destroying worms, insects, mollusca, &c. for the purpose of dissecting, without injuring their organization. Mollusca, (snails, for instance,) as SWAMMERDAM has remarked, are to be allowed to die in water, because by that means their body swells, and all the parts become more distinctly visible; they may afterwards be kept in spirit (though not too long) for dissection. Worms, the larger zoophytes, (for the smaller must be examined whilst alive,) caterpillars, &c. and also the smaller amphibia and fishes, are best destroyed by means of spirit. Insects, on the contrary, by being dipped rapidly in boiling water, or in oil of turpentine.

As regards the dissection of larger animals, we may here use with advantage knives of a large size, and, instead of forceps, suitable hooks with handles.

In animals of considerable size we can generally make artificial skeletons only, after the bones have been sufficiently cleaned by boiling or maceration. In smaller animals, on the contrary, such as birds, amphibia, and fishes, of which last it is very difficult to make good skeletons, the object will be best accomplished by at once making the bones as clean as possible, without injuring the capsular ligaments, soaking the preparation in water that is incessantly changed, and, lastly, bleaching it for some time in the sun.

Lastly, we may mention injections as affording a very essential assistance in zootomical investigations for physiological purposes: in small animals, and in the more minute parts, these must consist of compositions with wax, very florid and coloured; but above all of mercury. The latter, however, is not suitable for very soft bodies, *e. g.* medusæ, &c. in which cases we may employ injections of coloured milk, and similar substances.

PATHOLOGY.

Sir H. HALFORD *on Tic Douloureux.*—May I venture to throw out an opinion, founded on the observations with which my experience has furnished me, that the disease is connected with some preternatural growth of bone, or a deposition of bone in a part of the animal economy where it is not usually found in a sound and healthy condition of it, or with a diseased bone?

The following cases have occurred to me, and seem to give a degree of probability to this surmise; and I throw it out for the consideration of the profession, in order that a number of facts may be collected, from which a safe inference at length can be drawn.

A lady, forty years of age, suffered under the violent form of tic douloureux, at Brighton, notwithstanding the careful attention and skill of a very judicious physician there. On returning to town, it was observed that the rending spasms, by which the disease is marked, were frequently preceded by an uneasiness in one particular tooth, which exhibited, however, no signs of unsoundness; but the constancy of this symptom was enough to justify the extraction of the tooth in this instance, (though the failure of this expedient to afford relief in general does not encourage recourse to the operation,) and, on its being drawn, a large exostosis was observed at the root of the tooth, and the lady never suffered more than very slight attacks, and those very seldom, afterwards.

The D. of G. was attended by Dr. Baillie and myself, for six weeks, under this disease, in its most marked and painful form, without deriving benefit from our prescriptions. At length we thought it best to advise him to repair to the sea-coast, in hopes of renovating the shattered system by taking bark there. After he had sojourned a month by the sea-side, a portion of bone exfoliated from the antrum highmorianum, and the D. recovered immediately, and has never suffered the disease since. The bone had been hurt, probably, by a fall from his horse, which the D. had met with some months before.

The late Earl of C. underwent martyrdom by this disease, and excited the warmest sympathy of his friends by the agonies he sustained for many years. He submitted to the operation for the division of several branches of the fifth pair of nerves repeatedly, by Sir Everard Home and by Mr. Charles Bell, without obtaining more than mere temporary relief. At length he was seized by apoplexy, and lay insensible for some days, and in great peril from the attack, but finally recovered. After the apoplexy, the paroxysms of the tic douloureux became less frequent and less severe, and were administered so satisfactorily by an ingenious physician, who wrote his inaugural exercise on the disease. For the last year or two of his life, his lordship had ceased to suffer from the tic, and died at an advanced age, without any marked malady. His head was not examined after death, and therefore we are left to conjecture only what might have been the immediate cause of his former sufferings. Whilst I attended him, he underwent repeated exfoliations of the alveolar processes of the teeth, which I thought occasioned his torment; and, to account for the cessation of the complaint, I suppose that these efforts to throw off diseased portions of bone might have ceased, or that the apoplexy had disqualified the nerves for suffering so exquisitely; but there might have been besides, as some later instances have made probable, disease in the bones of the head.

The late Dr. P. fell a sacrifice to this dreadful disease, after sustaining its tortures for some years, with a constancy which attracted all our pity and esteem, and died at last under apoplexy. No assistance which the experience of any of us could afford him gave him relief, or controlled the violence of his attacks. On examining his head after death, there was found an unusual thickness of the os frontis, where it had been sawn through above the frontal sinuses, and at its juncture with the parietal bones. There was discovered also on the falciform process of the dura mater, at a little distance from the crista galli, a small osseous substance about three-eighths of an inch in length, rather less in breadth, and about a line in thickness. The vessels of the pia mater were turged with blood, and about an ounce of fluid occupied the ventricles. I lamented that the frontal sinuses had not been examined; for I remember he replied to a question which I once put to him, as to his ever having experienced any suppuration within any bony cavity, that he had twice suffered suppuration in the frontal sinuses. Dr. P. had submitted, with great patience, to a division of several branches of the fifth pair of nerves, under the judicious operation of Sir A. Cooper, who, on my mentioning to him the notion I entertained of the cause of tic douloureux, was so obliging as to show me the skull of a person who had died of this disease in the country. The internal surface of the frontal bone is a perfect rock-work. (*Medical Gazette.*)

Death from swallowing two leaden bullets.—Peritoneal inflammation resulted, and a fluctuation was felt. After death, one of the bullets was found near the anus in the pelvis, on the right side, at the termination of a fistulous canal, extending to the colon, which was perforated below. This canal contained pus and fæces. The bullet was evidently making its way into the rectum, which would have been accomplished had the patient survived.

An abscess also was formed and broke in the left groin, where the other bullet, in all probability, would have been found, had search been made for it.

This case is detailed by the editor of the *Philadelphia Journal.*

PRACTICAL MEDICINE.

Chorea cured by Iodine.—Dr. PELTZ relates an interesting case of this nature. He was led to use the Iodine from the following pathological views: He supposes the disease to be seated in part, if not altogether, in the tunica arachnoidea. It may be divided into acute and chronic. The acute consists in active inflammation of the above-named membrane, and the chronic in a thickening of the same, being a consequence of the acute stage, which yields to local and general active depletion, and the antiphlogistic regimen. It is to the chronic form that iodine is applicable.

In the case before us, Dr. P. directed fifteen leeches to each temple; salts, to procure free alvine evacuations; with pediluvium and sinapisms. The leeches and salts to be repeated every other day, and the pediluvium and sinapisms every day, for ten days. A blister was applied to the back of the neck, and kept open.

Frictions of turpentine were employed with some effect along the spine, and continued for some time. Under this treatment the improvement was slight. When Dr. P. thought that the chronic form had supervened, he prescribed Tr. Iodinæ in doses of six drops three times a day, which was gradually increased to twenty-four drops three times a day. Under this plan she improved, and at length completely recovered. (*Philadelphia Journal.*)

Constipation.—Dr. PARRISH, of Pennsylvania, remarks that there is a form of constipation apt to be mistaken for diarrhœa. He says,

It occasionally happens that we are called to patients labouring under apparent diarrhœa, with frequent liquid evacuations, which in fact depend upon the collection of a mass of impacted and hardened fæces in the large intestines. The importance of forming a proper diagnosis must be obvious to every one; as treatment calculated to lessen or arrest the peristaltic action would certainly aggravate the disorder. In one of the cases recorded in the London Medical Observations, though, after long suffering, considerable relief was obtained by the discovery and removal of the offending cause, yet so much mischief had been previously produced, that the system of the patient sunk, and death ultimately resulted. The liability to mistake is increased by the insidious manner in which the complaint sometimes makes its approach. The patient has regular daily evacuations, a portion of the fæces being discharged, and a portion retained, till at length the accumulation becomes so great, and the mass so compact and hard, that the bowels are totally unable to overcome its resistance. But the passages, instead of being diminished, are now increased in number. The irritation of the mucous coat gives rise to augmented secretion; and the liquid, finding its way between the hardened mass and the side of the bowel, is discharged by stool. This happens more frequently as the irritation becomes greater, till at length the patient, believing himself to be affected with looseness of the bowels, and wearing away with the violence of the complaint, applies for medical advice. Should the physician, listening to his representations, mistake the nature of the affection and treat it as diarrhœa, the most serious consequences may be apprehended. An attentive examination of the symptoms will always enable him to form a correct judgment.

It will be readily conceived that, with such collections of offensive matter in the bowels, great abdominal uneasiness and irritation will be experienced; and frequent efforts will be made to procure relief by stool. These efforts, though generally productive of liquid discharges, are attended with much straining; and, as they are ineffectual in removing the offending cause, are not followed by entire relief. By this circumstance alone the complaint may be distinguished from diarrhœa, in which the pain always ceases for a time after the discharge. When the mass is situated in the colon, it sometimes happens that the symptoms of enteritis make their appearance; as tension of the abdomen, and great soreness upon pressure, attended with considerable febrile excitement. When the rectum is the seat of obstruction, the irritation occasioned by the pressure of the fæces is often extended to the bladder, and disease of this organ may be suspected as the sole cause of the symptoms. The same remark is applicable to the uterine system. In these cases, examination by the finger in the rectum will sometimes detect the real seat of disease; and the impossibility of throwing up injections, or their immediate return after they have been introduced into the bowel, affords additional evidence of the existence of obstruction.

The nature of the complaint having been ascertained, the treatment is exceedingly simple. Purgatives, assisted by injections, are the remedies chiefly to be relied on. I generally employ castor oil, or senna and salts, or jalap and cream of tartar. It is not sufficient to procure a few passages only: the cathartic should be repeated frequently, till hardened fæces cease to be discharged; and the quantity of dark-coloured offensive matter which thus comes away is sometimes so great as almost to exceed belief. When the feculent mass occupies the rectum, mechanical means, as the use of the finger or the handle of a spoon, may be brought in aid of the cathartic. The warm bath also will be occasionally found highly useful, by inducing relaxation; and general and local bleeding, with blisters to the abdomen, become necessary when symptoms of enteritis conjoin themselves with the constipation.

After the obstruction has been removed, its return should be obviated by the use of a laxative diet, assisted, if necessary, by an occasional resort to the milder cathartics.

One of the first cases which fell under my notice was that of a lady of this city. Some weeks after parturition, she was attacked with severe pain, and much general uneasiness in her abdomen, attended with frequent discharges from her bowels. When I first saw her, she told me that she was labouring under a "putrid lax;" a name she was induced to give to the complaint, in consequence of the extreme fetor of the evacuations. She was taking opium, port wine, and bark, with the view of strengthening her system, and checking the discharge. Finding, upon inquiry, that she had been affected in this way for a long time,—that her suffering was almost continual,—and that not even temporary relief was afforded by the evacuations,—I at once suspected the existence of hardened fæces in the bowels. The course of treatment she was before pursuing was immediately changed, and cathartic substituted for astringent medicine. By the free and repeated use of castor oil, which was happily well retained by the stomach, the bowels were thoroughly evacuated, and large quantities of feculent matter brought away, to the indescribable relief of the patient. She told me she suspected that the mass had remained in her intestines for five weeks; and that, when it was discharged, the first stools were so exceedingly offensive as almost to make her faint.

About the same time I was called to a little girl, in the family of a gentleman of Southwark, affected in a similar manner. She appeared to be labouring under diarrhœa; but no relief resulted from the evacuations: the pain and irritation were constant, considerable fever was present, and the symptoms of enteritis occurred during the course of the complaint. From these circumstances, suspecting the existence of feculent accumulations, I prescribed cathartics and injections, which were very freely administered. To overcome the inflammatory symptoms, several bleedings were necessary; a blister was also applied over the abdomen, and the warm bath employed. Her bowels at length yielded to the combined influence of these remedies, and large quantities of hardened fæces were discharged. After this she rapidly recovered.

I have known the complaint to occur in very young children. Not many years ago, I had under my care a little boy, the son of a highly respectable merchant of this city, who complained of great distress in his bowels, strained very much at stool, and, together with other liquid evacuation, passed a little blood. As the irritation was maintained notwithstanding the discharges, there was reason to suspect obstruction in the bowels; and the suspicion was confirmed by the fact that every effort to administer injections was rendered abortive by some impediment in the rectum. Thinking that the obstruction might be owing to hardened fæces, I passed my finger into the rectum, and found that such was really the case. By means of the finger, and the handle of a dessert spoon, I succeeded in breaking down the mass, and bringing most of it away. The patient was afterwards entirely relieved by purgatives. In this case I attributed the constipation to a diet almost exclusively of cow's milk. Another instance soon afterwards occurred to me, of a precisely similar character: the previous diet had been the same, and the symptoms yielded to the same treatment. In both instances, the mass which had occupied the rectum was found, when discharged, to consist of white indurated balls, bearing a close resemblance to soft white chalk. After the discharge of this matter, the patients were put upon a laxative diet, consisting of mush and molasses, with animal broths, to the entire exclusion of milk. In one of the cases, there was no return of the complaint; in the other, owing to the resumption of the former diet, there was a second attack, which, however, soon yielded to the usual measures. I have since seen several cases of constipation, with similar symptoms, originating in the same cause.

It occasionally happens that masses of indurated fæces are retained in the rectum, without producing any serious consequences. An old gentleman once applied to me on account of the constipated state of his bowels: he had experienced no great injury to his health; but his complaint was inconvenient, and he was naturally desirous of its removal. I prescribed cathartics, but there seemed to be some impediment which resisted the attempts at evacuation. I explained to him what I believed to be the nature of his case; and with his own finger he broke down the mass, and relieved himself of the inconvenience. Cases of a similar nature have since frequently occurred to me, generally among old people. (*North-American Med. and Surg. Journal.*)

SURGERY.

Case of Anchylosis.—Dr. Barton has made some farther observations on the case of John Coyle, published in a recent Number of this Journal:

On the 19th of May, (says Dr. B.) he was discharged from the Pennsylvania Hospital, cured, using only a short cane. His freedom from hospital restraint tempted him to indulge in walking a great distance through the city, which caused him a return of pain and some inflammation. A few days of rest relieved him, and since that he has suffered no inconvenience. Some time in June, I made an unexpected visit to him in the vicinity of the city, and found that he had, just before my arrival, returned to the farm-house, with his cane in one hand, and a gun and some game in the other. I mention this incident to show that he not only had endured the fatigue of walking, but had sustained the jar accompanying the explosion of his piece with impunity.

I have recently made an examination of the hip, for the purpose of stating its present, and I suppose permanent, condition. There does not appear to have been any bony encroachment on the joint, but the ligamentous structure seems to have been so much thickened as to restrict, by its inelasticity, much of the motion of abduction and rotation. Adduction, flexion, and extension, appear to be unaffected; but, as any imperfection in the various movements is amply supplied by the latitude of motion between the lumbar vertebræ, it requires nice discrimination to detect, in walking, any want of free motion at the artificial joint; being able to project the foot in any direction. When he sits down, and the knees are placed in a line with each other, it will be found that the joint is flexed to its utmost, and that the curvature of the lumbar vertebræ contributes then to enable him to assume this position.

The patient declares that he never in exercise ascribes particular weakness to his hip, but that he endures fatigue there as well as in any other part of the body, and that he can walk ten miles without inconvenience.

Experience, founded on the treatment and result of this case, will, I think, induce me, on another occasion, to confine my patient for a longer time to his bed, in order to allow the newly formed ligaments to be perfected and strengthened. By this means it is probable that the erysipelatous attacks to which Coyle was subjected, may be avoided. The time also may be profitably employed in practising the movement of the joint. Advantage probably would be gained at this period of the case by changing the angle of the limb, and propping it in different positions for a day or two at a time. The eventual flexibility of the joint will, I think, be proportionate to the extent of movement during the curative process.

In contemplating this operation in such cases, the circumstance should not be overlooked in relation to its beneficial results, that it is not merely the loss of motion in a joint which constitutes the evil to be corrected, but it is also the mal-position of the limb. If, therefore, the operation should be performed, and the surgeon fail to effect the establishment of a new joint, in consequence of the tendency to ossific reunion, the lesion of the bone will enable him to place the limb in that position best suited for convenience and usefulness before consolidation shall again take place. The patient thus, in either event, will be compensated for his suffering, in the one instance by the services of a joint, or in the other by a removal of that distortion, which, in the lower extremity, would compel him to use crutches, or, in the upper, deprive him of many of the offices it would be capable of performing in a more favorable position of the limb.

An interesting and encouraging fact bearing upon this subject will be found in the perusal of Mr. SYME's case* of excision of the head of the humerus, in a carious condition. The glenoid cavity of the scapula was in a sound state, and the end of the humerus formed with it a joint susceptible of various movements by means of its own muscles.

The Periscopes of several of our own and of the foreign journals, contain a brief notice taken from a German periodical, (Gerson and Julius' Magazine for July and August, 1825,) of a joint formed also at the shoulder, by the removal of a spicula of bone projecting from the cavity of an ununited fracture. In this case it is said the muscles performed their respective offices. (*North American Med. and Surg. Journal.*)

External Application of the Nitrate of Silver.—Dr. BROWN, one of the physicians to the New-York Hospital, makes the following remarks upon the use of the nitrate of silver.

Corns.—Physicians are frequently asked the question, " what is good for corns?" and indeed it can hardly be otherwise, as almost all persons are more or less subject to them. Pressure is the sole cause of these troublesome excrescences, as it is of the ulcerated toe. They are generally produced by tight shoes and boots: hence many belles and beaus suffer greatly from them. But heavy persons are liable to corns, especially if they walk much, even though they wear loose shoes.

The formation of corns is doubtless a mere thickening of the cuticle, layer upon layer. They are painful and troublesome in proportion to their size. The pressure of the shoe or boot upon these hardened substances forces them in upon the cutis vera. This produces a constant irritation and an inflammation of the true skin, under and around the thickened cuticle; and, from the highly vascular and nervous structure of the skin, and the counter pressure of the bone and solid parts immediately beneath, produces that very acute pain which we so often suffer from corns. There is no difficulty in curing them; neither should we have them, provided the cause, which is very evident, be removed. But, from feelings of pride in some, and from necessity in others, most persons suffer from them. It becomes then a subject of important information how to manage these troublesome excrescences while the cause continues to operate. We conceive the following plan the best: Bathe the foot at bedtime in warm water, until the corn becomes considerably softened. Shave the corn down with a knife or scalpel, but not so close as to draw the blood; then daub the part freely with the Nitrate of Silver, previously moistened with saliva or water, (the former is preferable.) The application should be extended a little beyond the borders of the corn, completely around, until such a quantity adheres as shall in a short time change it to a dark grey, and eventually completely black. There is no hazard of getting too much, especially upon the corn itself. Then wind a little raw cotton around the toe, and put on a stocking to confine it over the corn.

In about two or three weeks, the part acted upon by the caustic will slough off, including every vestige of corn, leaving the part quite smooth and of a natural appearance.

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* See Edinb. Med. and Surg. Journal, vol. xxvi. 1826.

In this manner we have often removed corns which have not been succeeded by others in the same situation. They frequently, however, after awhile, grow again, from the operation of the ordinary cause, when they may be again removed in the same manner, and thus kept down with little trouble. Every individual, after having been once instructed, can manage his own case.

If the application be made at bedtime, which we advise, as it will afford several hours of complete relief from the operating cause, the tenderness and inflammation will be greatly abated, frequently completely relieved, by morning. The foot should be covered with cotton as long as any tenderness remains.

Ulcerated Throat, Mouth, and Tongue.—It is useless, perhaps, for us to speak of the good effects of the Nitrate of Silver in the venereal sore throat. It is doubtless the best local application, if used in a pure state. Dissolving in water renders it comparatively inert.

Several cases of ulcerated tongue have occurred under our observation, within a few years, of a peculiar nature. They were in persons of adult age, and mostly of a scrofulous or leuco-phlegmatic habit. The ulcers were scattered in different parts of this organ, and some far back at its base. They were of an aphthous appearance, some of which were quite deep, though not large, having inflamed edges. Several were of many months' standing, and had resisted various applications. We could trace them to no particular cause, but a peculiarity of constitution with a derangement of the digestive organs.

They were all healed in a very few days by the application of the lunar caustic.

The worst ulcerated tongue we ever beheld occurred to us a short time since, which was occasioned by an imprudent use of mercury in a peculiar habit of body. The tongue was ulcerated on each side, from one extremity to the other, and considerably thickened. The patient had not been able to eat, to thrust the tongue out of the mouth, or even to articulate, for three weeks. Her physician had directed the usual means, but amendment was so slow she thought proper to consult us. One free application of the caustic over the whole surface of the ulcers made a material alteration within twenty-four hours. It was applied daily, and within four days she could thrust the tongue from her mouth without any difficulty, as the swelling had greatly subsided; in eight or ten days she was completely cured.

The Nitrate of Silver appears serviceable in every grade of sore mouth.

I would remark upon the mode of applying the caustic within the mouth. As the parts are always moistened with the saliva, the stick should be perfectly dry. Touch the affected part, and remove the caustic instantaneously. If the part touched has received sufficient of its substance that it turns immediately white, it need not be applied again for that time:* if not, touch it a second time, and a third if necessary, till such effect be produced.

Sore Nipples.—Every practitioner who is much conversant with obstetric practice must have witnessed cases of this painful, and often obstinate and serious, affection. Serious, because it not unfrequently produces the necessity of taking the child from the mother's breast entirely, and sometimes occasions the obliteration of the orifice or destruction of the whole nipple, and of course renders it ever after useless. The ordinary means recommended in such cases often prove inefficient, or so slow in producing the desired effect as to induce mothers and nurses to abandon the prescriptions of the accoucheur, and to substitute their own or some hearsay remedy, which may be warmly recommended in such cases. Hence, under such a course of tampering, serious consequences are liable to occur, as above stated; and, indeed, they often prove extremely obstinate under the most judicious management.

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* If the ulcer be small or deep, the stick should be brought to a point, or made somewhat conical, in order to carry it more surely to the bottom.

The cause of this disease is very obvious, the stimulus of nursing the child in cases when the nipple has a peculiarly thin and tender cuticle. But we think such cases may generally be speedily cured, without removing the child from the breast; and that this may be effected by the application of the Nitrate of Silver. Having witnessed some troublesome affections of this nature, and been frequently disappointed in our prescriptions, and considering the efficacy of Nitrate of Silver in allaying erysipelatous inflammation, and in healing irritable ulcers of the cornea and other parts of the body, we tried it in the following case:

A lady, with her first child, had both nipples sore in three weeks after her confinement, which she attributed to the nipple glasses. Various applications were made with great care and attention; notwithstanding which they continued to grow worse for eight or ten days, when they became so exquisitely tender that the nursing of the child gave her excruciating torture. We proposed the application of the caustic, to which she assented.

At this time the top of the left nipple was in a state of ulceration, nearly surrounding the orifice. It appeared to be of the phagedenic character and extending. There were also several rhagades upon the sides of the nipple, running transversely, the longest of which was at the base. These fissures, whenever the child drew upon the breast, gave exquisite pain.

A stick of the Nitrate of Silver, with a conical point, was moistened and gently applied to the fissure, and to the edges of the ulcer upon the top of the nipple, so as to change the surface to a greyish colour.

The tenderness was less the following day, when it was applied twice, morning and evening. Two applications were also made the two succeeding days; after which, one only was made daily.

Within seven days the fissures were entirely healed, and the top nearly, so that nursing the child occasioned but little pain. The practice was pursued till they were completely healed, the child being continued at the breast the whole time.

The artificial nipple, made of the heifer's teat, expedites the cure if it can be used. In the above case, the child could not be made to suck it.

The question may naturally be suggested, whether it be perfectly safe for the child to suck the nipple to which the caustic has been applied? The affected part should be so lightly touched that but a small quantity adheres to the surface, which, combining with the substance of the skin, loses immediately its causticity, and becomes an inert substance, which, if taken into the child's stomach in a minute quantity, occasions no inconvenience.

We have also used the Nitrate of Silver with success in spongy gums, attended with a frequent oozing of blood, which were of long standing, and resisted other modes of treatment.

In chronic inflammation of the eyelids and cornea, it has proved effectual. It co-operates with nature in a truly wonderful manner, in restoring to healthy action parts which have been disorganised by wounds of different kinds, by ulcers and different grades of inflammatory action, particularly all character of unhealthy inflammation. If it be that kind of inflammation which attends aphthous affections of the mouth and throat, ulcers of the cornea, and various other cases of painful and unhealthy inflammatory action, it soon changes its character, and substitutes one which is less painful and of a healthy character, which disposes ulcers to heal.

In parts which want more action, as in lacerated and punctured wounds, and in ulcers of the phagedenic character and diminished action, it excites action to such a degree, and such only, as disposes them to healthy granulations.

It is equally favorable to ulcers and inflammation of the mucous surfaces, as in diseases of the skin; as in ulcers of the vagina and upon the glans penis, and in ulcers of the throat, mouth, and tongue. (*American Med. Recorder.*)

Necrosis.—The peculiar views of Professor Smith, and his mode of treating this disease, are contained in the following quotation:

"Necrosis, on the larger limbs, is somewhat analogous to the felon on the finger, where the parts beneath the strong fascia of the part are inflamed. In both cases a fibrous membrane is concerned, and, as in felon, an incision carried through the fibrous membrane to the extent of the inflammation stops the further progress of the disease; so, in necrosis, when the soft parts, with the periosteum, are divided, the disease is cured. The treatment, after the incision, both general and topical, should be such as we recommend in cases of simple incised wounds attended with considerable inflammation; excepting that we should not try to approximate the edges of the incision by adhesive plasters, but dress them with simple applications, such as lint spread with simple cerate, and evaporating lotions applied to a considerable portion of the limb, at least as far as the inflammation has extended. The general treatment consists in cooling purgatives, nauseating doses of antimony, and opium sufficient to allay irritation and procure rest."

He divides the disease into three stages: the first is inflammation of the bone and periosteum; the second when matter forms underneath the periosteum; and the third when the matter has escaped from beneath the periosteum, and is lodged in the surrounding soft parts. The first is to be treated by incision through the periosteum, the second by removing portions of the bone, by means of the trephine, after the incision has been made, so as to let out any matter which may form within the walls of the bone, thereby preventing its death. The last stage is mostly accompanied with a death of the bone, and requires the removal of the sequestra either by the efforts of nature or artificial interference. In describing the process, he gives some useful directions in relation to the operation, which we cannot detail. (*Philadelphia Journal.*)

Cases, by Dr. C. A. Weinhold, Professor at Halle. (From the *Bibliothek der Practischen Heilkunde.*)

I. *A large Callus of the left Femur, and a two-inch Shortening of the Limb, cured by Perforation and the Introduction of a Seton.*

John X. R., of eighteen years of age, broke, on the 21st of June, his left femur about its middle, and was treated in the usual manner by a neighbouring surgeon, till the expiration of the fourth week, when, at the earnest solicitation of his employer, he was permitted to resume his labours in the fields.

After a continued use of the limb for ten weeks, it became fully two inches shorter than the opposite one, and the callus acquired a size fully equal to that of a new-born child's head. At this time the sufferer was unable to work any longer, and therefore compelled to quit his employment, and to return to his destitute mother. There Dr. W. first saw and examined him, and found the callus to measure eighteen and a half inches in circumference. The cellular texture, both above and below the enlargement of the bone, was loaded with effused lymph, and in many places there were indurations of the soft parts, which ultimately suppurated and formed fistulæ. The disease was considered most unpromising, but, notwithstanding, the limb was placed in a proper apparatus, and extension by means of pulleys was made and persevered in for eight days, without the slightest effect upon the callus. Three months had now expired since the accident first took place, and the callus was so firm that no mechanical means whatever could effect its elongation.

In this state of things, the surgeon found himself obliged to abandon the patient to his miserable fate, or to resort to some new and untried expedient for his relief. He accordingly determined to perforate the callus, and pass through it a seton besmeared with stimulating substances, with the view of exciting inflammation and suppuration of the bone, and finally to bring about a softening and absorption of the callus, and, by a proper degree of regular extension, to restore the bone to its original length. To effect this, Dr. W., on the 11th November, in the presence of several medical gentlemen, adapted his needle-trephine to a turning bow, pierced the soft parts about an inch outside of the femoral artery, with the point of the instrument; which, on reaching the callus, was gently turned by the bow till it had perforated its external layers, and then it suddenly passed through a cavity about four inches deep before it reached the opposite side; which being bored in the same manner as the first, the point of the instrument was pushed through the muscle and integuments, and the seton introduced. The hemorrhage attending this operation was so trifling that it barely amounted to a single ounce.

During the first three days, cold poultices were applied to the parts. On the fourth and subsequent days, the seton, anointed with the Bals. Arceus, was moved through the wound twice each day. During the fifth week of the patient's confinement, the hardened cellular substance suppurated freely, the pus finding an exit by an opening above and below the callus. These fistulæ were cured by compression shortly after the induration of the cellular texture had disappeared.

About the sixth week there was great pain of the callus, and the temperature of the part was much increased: these symptoms yielded, in the course of forty-eight hours, to cold poultices.

In the seventh week the long-desired suppuration of the callus took place, and, on pressure with the finger, there was evidently a large chasm in it, indicating the propriety of the immediate application of the apparatus for extension: this, by the tenth week, produced such an elongation of the limb that it was barely two lines shorter than that of the opposite side.

For the sake of greater security, the seton was permitted to remain in the part till the twelfth week, at which time it was removed, and the orifice healed. A few weeks after, the callus was greatly diminished, the patient walked without crutches, and the diseased thigh was as large and almost as natural as the sound one. The man, after he had recovered his strength, was enabled to earn his livelihood as a coachman.

II. *Cure of artificial Articulation of the left Tibia, the ends of the bone being united by a fibrous structure, with a deep-seated suppuration of the calf of the leg.*

J. C. N., fifty-two years old, by profession a coachman, had the misfortune, in descending from the coach-box, to fracture his tibia, one and a half inches above its articulation with the foot. The next day the limb was properly attended to, and confined in a fracture-box; but, probably in consequence of too much motion, after a confinement of eight weeks, it was discovered that an artificial joint and a collection of matter in the calf of the leg had been formed. At the particular request of a medical friend, Dr. W. was induced to undertake the treatment of the case, according to his new mode of operating upon and of curing artificial joints. This method differs from that of Dr. Physick in its being more active and certain in its operation. Wardrop publishes cases in which Dr. P.'s plan failed entirely, and Hutchinson was compelled to withdraw his seton without effecting a cure.

After much reflection and observation, Dr. W. discovered that the inefficacy of the ordinary seton was owing to its exciting too slight an inflammation, and to its permitting the access of the external air to the long extremities; which, from that cause, are extremely disposed to become carious. Both these inconveniences are fully obviated by a funnel-shaped wound and a wedge-like seton.

In this case, a wound of an inch long was made upon the external part of the tibia down to the artificial joint, and a tape being previously passed through the eye of the needle-trephine, this was made to perforate the artificial joint, and pass on through the integuments of the opposite side, and then the tape, with the cuneiform seton attached, was drawn, till this last filled entirely the vacant space between the osseous extremities. The operation lasted at most but three minutes, and with the blood flowed a fetid pus, which became much more abundant upon pressure being made upon the calf of the leg. It was evident that the purulent collection communicated with the artificial joint, and of course the probability of the adhesive process taking place was materially lessened, and the hectic fever which already prevailed rendered the cure extremely doubtful.

After proceeding so far, it was altogether impossible to leave the work half done; therefore an incision was made into the abscess, from which a very large quantity of fetid ichor was discharged, and a colliquative suppuration followed, and nearly reduced the poor sufferer to the grave. Many physicians, at this unhappy time, recommended amputation as the only means of saving the patient's life; but, feeling the greatest confidence in the resources of the art, Dr. W. rejected the proposition, and succeeded, by proper bandaging and tonic medicines, not only in stopping the suppuration, but also, by the end of the thirteenth week, in curing the artificial joint without anchylosis or stiffness of the ankle-joint.

III. *Cure of an artificial Joint of ten years' standing, with Caries and Fistulæ, effected by a treatment of three months.*

J. C. H., a peasant, twenty years of age, when ten years old, fractured his right femur about its middle, and was treated in the usual manner by a country surgeon. At the end of the fourth week, whilst his parents were absent, he got up and used the limb; the consequence was, the formation of an artificial joint at the expiration of the eighth week. He, with the assistance of a stick, made out to move about with much difficulty, and was incapable of doing any duty but that of watching cattle, till he reached his nineteenth year, when, with the view of supporting himself, he engaged to do the duty of a stable boy, and soon, by his exertions, produced an inflammation of the artificial joint, which was succeeded by caries and a suppuration that formed two fistulæ posteriorly.

It was under these circumstances that he was taken to Dr. W. for his aid. Upon examination, the two fistulæ were found to terminate an inch from each other in the carious artificial joint. They were both thrown into one by an incision, and the cuneiform seton was introduced in the same manner and by the same means as in the foregoing case. A reaction speedily took place: the suppuration became more healthy, and each day carious portions of bone separated till the termination of the sixth week, when long splints were applied, and the part got firmer daily till the twelfth week, at which time, the bone bending no more, the seton was reduced in size each day, and finally withdrawn altogether. In three or four weeks after this, the patient could walk well, and was discharged perfectly cured.

IV.—*Fatal Attempt to cure an Artificial Joint by the Seton.*

A man, forty years of age, was thrown from a horse with his right hip against a stone, and fractured the neck of the femur, besides splintering the acetabulum. The surgeon, who was first called, considered the case as one of severe contusion, and ordered the part to be bathed with brandy. Three months after the accident, the patient was taken to Dr. W., who clearly ascertained that an artificial joint had been established, and, judging from the painfulness of the parts, he strongly suspected the existence of chronic inflammation and suppuration. The patient entreated the Doctor to attempt something for his relief, and the probability of success was deemed considerable, provided there should be no suppuration of the acetabulum or pelvis.

The sufferer was laid on a table, with the right hip projecting about four inches beyond its edge, and with the fingers the artificial joint was distinctly observable, about equidistant from the edge of the acetabulum and the great trochanter. An incision was made down to the artificial joint, and a large semicircular needle, armed with a tape and the cuneiform seton, was introduced from before backwards through it and the glutei muscles, till it passed out a little behind the great trochanter. The operation succeeded perfectly, and the patient complained of but little pain. Unfortunately, however, a putrid pus flowed from the wound, which, as it afterwards appeared, came from the carious acetabulum, and produced so active a hectic that the patient sunk, after suffering six weeks.

Upon inspection of the body, it appeared that the seton had passed directly through the artificial articulation, and that there existed a caries of the acetabulum, and a collection of matter in the pelvis.

V. *Introduction of a Seton in a Case of Spina Ventosa.*

A young man, of nineteen years of age, was afflicted with a spina ventosa of the middle of the left femur, with several fistulæ running backwards from the tumor, which measured about three inches in diameter. Amputation had been resolved upon as the only alternative; but the patient, being a waggoner, had determined to submit to any course at all likely to preserve his limb. Dr. W. proposed to him to unite the fistulæ, bore through the tumor, and pass into it the cuneiform seton: to this he very willingly assented, and the operation was performed in the same manner as those already described. After the expiration of three days, when the inflammation had subsided, the seton, previously anointed with a balsamic ointment, was introduced every morning and evening, and was so managed that it effectually closed the wound against the external air, and in the course of three weeks produced a good suppuration. The inflammation at first enlarged the tumor and produced considerable pain; but experience had taught Dr. W. that those were symptoms inseparable from the action of the seton, and that they were instrumental in exciting new life in the bone, which would resume, after the withdrawal of the seton, its healthy state. At the close of the thirteenth week the seton was removed, the apertures healed, and the bone speedily reduced to one-third of its former size.

Successful Ligature of the Common Iliac Artery. By VALENTINE MOTT, M.D. Professor of Surgery, New York.—ISRAEL CRANE, aged thirty-three years, by occupation a farmer, of temperate and regular habits, having generally enjoyed excellent health, says, about the middle of January, he felt some pain about the lower part of the belly, which he attributed to a fall received during the winter. He is in the habit of using great efforts in lifting heavy logs of wood, as his employment at this season consists in carrying wood to market. It, however, was not until a fortnight since, that he perceived any tumour about the lower part of the abdomen. Upon examination, the abdomen on the right side was considerably enlarged from about the crural arch, as high as the umbilicus. When the hand was applied to the parietes of the abdomen, a pulsation was felt and rendered visible to some distance. To the touch the tumour beat violently, and appeared to contain only fluid blood. It commenced a little above Poupart's ligament, and reaching, judging by the touch, from without, near the navel—inwards, almost to the linea alba—outwards and backwards filling up all the concavity of the ilium, and reaching beyond the posterior spinous process of that bone.

The rapid increase of this aneurismal tumour occasioned, as the countenance of our patient indicated, the most extreme agony. His sufferings at times were so great that his screams could be heard at a distance from the house. He had been bled several times, taken light food, and was kept constantly under the effect of opium. He was now informed of the serious nature of his case, and that without an operation very little chance of his life remained; with great composure he immediately consented to whatever would give him the best prospect of saving his life.

The pubes and groin of the right side being shaved, an incision was commenced just above the external abdominal ring, and carried in a semicircular direction half an inch above Poupart's ligament, until it terminated a little beyond the anterior spinous process of the ilium, making it in extent about five inches. The integuments and superficial fascia were now divided, which exposed the tendinous part of the external oblique muscle, upon cutting which in the whole course of the incision, the muscular fibres of the internal oblique were exposed; the fibres of which were cautiously raised by the forceps and cut from the upper edge of Poupart's ligament. This exposed the spermatic chord, the cellular covering of which was now raised with the forceps, and divided to an extent sufficient to admit the forefinger of the left hand to pass upon the cord into the internal abdominal ring. The finger serving now as a director, enabled me to divide the internal oblique and transversalis muscles to the extent of the external incision, while it protected the peritoneum. In the division of the last-mentioned muscles outwardly, the circumflexa ilii artery was cut through, and it yielded for a few minutes a smart bleeding. This, with a smaller artery upon the surface of the internal oblique muscle, between the rings, and one in the integuments, were all that required ligatures.

With the tumour beating furiously underneath, I now attempted to raise the peritoneum from it, which we found difficult and dangerous, as it was adherent to it in every direction. By degrees we separated it with great caution from the aneurismal tumour, which had now bulged up very much into the incision. But we soon found that the external incision did not enable us to arrive to more than half the extent of the tumour upwards. It was therefore extended upwards and backwards about half an inch within the ilium, to the distance of three inches, making a wound in all about eight inches in length.

The separation of the peritoneum was now continued, until the fingers arrived at the upper part of the tumour, which was found to terminate at the going off of the internal iliac artery. The common iliac was next examined by passing the fingers upon the promontory of the sacrum, and to the touch appearing to be sound, we determined to place our ligature upon it about half way between the aneurism and the aorta, with a view to allow length of vessel enough on each side of it to be united by the adhesive process.

The great current of blood through the aorta made it necessary to allow as much of the primitive iliac to remain between it and the ligature as possible, and the probable disease of the artery higher than the aneurism, required that it should not be too low down. The depth of this wound, the size of the aneurism, and the pressure of the intestines downwards by the efforts to bear pain, made it almost impossible to see the vessel we wished to tie. By the aid of curved spatulas, such as I used in my operation upon the *innominata*, together with a thin, smooth piece of board, about three inches wide, prepared at the time, we succeeded in keeping up the peritoneal mass, and getting a distinct view of the arteria iliaca communis, on the side of the sacro vertebral promontory. This required great effort on our part, and could only be continued for a few seconds. The difficulty was greatly augmented by the elevation of the aneurismal tumour, and the interception it gave to the admission of light.

When we elevated the pelvis, the tumour obstructed our sight; when we depressed it, the crowding down of the intestines presented another difficulty. In this part of the operation I was greatly assisted by Dr. Osborn and my enterprising pupil, Adrian A. Kissam.

Introducing my right hand now behind the peritoneum, the artery was denuded with the nail of the forefinger, and the needle conveying the ligature was introduced from within outwards, guided by the forefinger of the left hand in order to avoid injuring the vein. The ligature was very readily passed underneath the artery, but considerable difficulty was experienced in hooking the eye of the needle, from the great depth of the wound and the impossibility of seeing it. The distance of the artery from the wound was the whole length of my aneurismal needle.

After drawing the ligature under the artery, we succeeded by the aid of our spatulas and board in getting a fair view of it, and were satisfied that it was fairly under the primitive iliac, a little below the bifurcation of the aorta. It was now tied—the knots were readily conveyed up to the artery by the fore-fingers—all pulsation in the tumour instantly ceased. The ligature upon the artery was very little below a point opposite the umbilicus.

The wound was now dressed with five interrupted sutures, passing them not only through the integuments, but the fibres of the cut muscles, so as to bring their divided edges together at all parts of the incision, which was muscular. Adhesive plaster to assist the stitches, lint and straps to retain it, completed the dressing. The operation lasted rather less than one hour.

He was removed from the table and put into bed upon his back, with the knee a little elevated upon pillows to relax the limb as much as possible, and to avoid pressure upon it. It was considerably cooler than the opposite leg, and flannels were applied all over it, and a bottle of warm water to the foot. From the habit he had been in of taking largely of anodynes, a tea-spoonful of the tinct. opii. was administered, with directions to repeat it in an hour if the pain should be severe.

In less than one hour from the operation, considerable reaction of the heart and arteries took place; he felt, as he stated, altogether relieved from the excruciating agony he had suffered since the aneurism commenced. The whole limb had now recovered its natural temperature.

March 16th.—The day after the operation, pulse eighty—skin moist—limb warm as the other—complains of some pain at the ligature—ordered a purgative of neutral salts.

17. Pulse eighty, and fuller than yesterday—took ℥x. of blood from his arm—skin moist—tongue brown—considerable uneasiness in the limb—no pain at the ligature—leg of natural heat—salts had a good effect.

18th. Pulse seventy-five—skin moist—tongue white—pain in the limb considerable—no pain at the ligature or in the wound—limb warm.

19th. Bled him today to ten ounces, the pulse being tense and beating eighty strokes in a minute—repeated the cathartic—suppuration appearing to have taken place, the dressings were removed.

20th. Pulse seventy and soft—skin moist—wound looks well—pain in the limb continues—leg warm as the other—cathartic operated well.

21st. Pulse seventy and soft—wound looks well—repeated the laxative—pain in the leg rather less—continues warm. There has been at no time tension of the abdomen or any particular uneasiness in that part. The patient thus far has been altogether more comfortable than could have been imagined. He takes more or less opium daily, from the long habit he has been in of taking anodynes.

26th. No unpleasant symptom—wound looks well—bled again to ℥xij. as there was a little tumefaction and inflammation about the wound.

30th. Our patient continues to do well—wound dressed daily.

April 30th. Is perfectly restored to health.

May 29th. My patient visited me today, having come twenty-five miles; he was so much improved in health that I did not recognise him. Examined the cicatrix and found it perfectly sound—could not discover any remains of aneurismal tumour—felt the epigastric artery much enlarged and beating strongly, and a feeble, though distinct, pulsation in the femoral artery immediately below the crural arch. The leg has its natural temperature and feeling, and he says it is as strong as the other.—*American Journal of Medical Sciences.*

Note of a Case of Fistula in the Lumbar Region, communicating with the Bladder. By L. **Proudfoot**, M.D.—E. D., aged twenty-four, applied to me on the 16th of March, 1827, on account of a fistulous opening which he had in the left lumbar region: upon examination with an elastic bougie, I found it entered about three inches straight forward, then taking a direction upwards, to the extent of eight inches, being within the parietes of the abdomen.

Mr. D. dates the commencement of the disease from a violent wrench, which he received at sea, while handing a topsail. This was immediately followed by a discharge of bloody urine and great prostration of strength, for several days.

I commenced the treatment by introducing a seton opposite the opening, and injecting a solution of Sulphas Cupri, of three grains to the ounce of water, internally; I prescribed the Murias Hyd. eight grains dissolved in eight ounces of brandy. Under this treatment his general health was much improved, and decidedly beneficial effects resulted from the injection, which was repeated every third day: the only uneasy sensation he felt was a slight pain in the left groin. About a fortnight after his application to me, he passed a considerable part of the injection from his bladder, which was followed by a discharge of wind from the urethra. This continued for several days, with a small discharge of urine from the opening in his back, particularly after getting up in the morning. He omitted taking the Murias Hyd., and I gave him the Bals. Copaiba in the dose of a tea-spoonful three times a day. Different injections were now employed; the black, yellow, and white wash were used, without any sensible difference in the depth of the opening.

The novelty of this case induced me to show it to my former preceptor and much esteemed friend, Dr. **Mott**, who strenuously recommended the use of the Oleum Terebinth.

About the beginning of October, I injected nearly two fluid drachms of the Oleum Terebinth. which soon after was voided by the bladder, with some discharge of flatus; since that time a great alteration has taken place, the depth of the fistula is at present about three inches, and the prospect of a recovery is now very flattering, the seton wore through the integuments in about three months, and the discharge from the opening has throughout the whole course of the disease, appeared perfectly healthy.

The injection was thrown to the top of the fistula by means of an elastic bottle, and a small catheter. (*Ibid.*)

CHEMISTRY.

Animal Matter in Mineral Waters.—A green matter is deposited from the water of the hot alkaline springs of Vichy, in France. It was analysed by **Vauquelin**, who found it to resemble the white of an egg. It is worthy of remark, that springs in the south of France, and in the north of Italy, which issue from primitive rocks, should contain this substance, whose composition is so nearly the same as that of organic matter. (*Edinburgh New Philosophical Journal.*)

MISCELLANEOUS.

On the Irritability of the Sensitive Plant.—M. **Dutrochet** has collected into a single volume the long and important researches which he has made upon the moving powers which act in organised bodies. His experiments on the sensitive plant occupy an essential part of this work. A new procedure, which he has employed in vegetable anatomy, has led him to results which would tend to invalidate a celebrated theory. He asserts that all the elementary organs of plants, that is to say, the cellules and tubes of which their body is composed, have an independent existence, and form circumscribed organs; so that these organs would only have to each other relations of vicinage, and would not form, by their assemblage, a really continuous tissue. He affirms that there are neither pores nor fissures visible to the microscope in the cellular tissue, any more than in the fibres of vegetables. There are only seen on the walls of these organs small semitransparent globular bodies, and linear bodies, which become opaque from the action of acids, and are rendered transparent by that of alkalies. M. Dutrochet considers these small bodies as the elements of a diffused nervous system. To the analogies of intimate structure and chemical nature, which he brings forward to support this opinion, the author adds physiological considerations, taken from experiments, which are peculiar to himself, and which, in his opinion, prove that the motions of vegetables are spontaneous: in other words, that they depend upon an internal principle, which immediately receives the influence of external agents. Refusing to admit *sensibility* in vegetables, M. Dutrochet substitutes for this term that of *nervimotility*.

With regard to the organ of motion in the leaves of the sensitive plant, M. Dutrochet has proved, by decisive experiments, that it consists in a bulging of the parenchyma, or of the *cortical medulla*, which is situated at the base of the petiole, and at the base of each of the leaflets of which the leaf is composed. He has discovered that this organ, to which he has given the name of *bourrelet*, is composed of globular cellules, disposed in longitudinal series, and filled with a coagulable fluid. It is not by means of joints that the sensitive plant, any more than the other irritable vegetables, moves its mobile parts; but by means of a curvature impressed on these parts in the place where the organ of motion occurs. Thus, in the sensitive plant, it is the bourrelets alone that, by curving, produce the folding of the leaves. M. Dutrochet has found that this curvature is the result of a vital elastic power, which even manifests itself in the thin slices that are taken from these bourrelets. He has given the name of *incurvation* to this phenomenon. Thus the vegetable irritability consists only in an elastic incurvation, which is sometimes fixed and sometimes oscillatory. For example, this elastic incurvation is fixed in the tendrils of vegetables, in the valves of the ovarium of the balsamine, &c.; it is oscillatory in the vegetables that are named *irritable*,—vegetables which present, in their mobile parts, a state of alternating incurvation and straightening.

It has long been known that the sensitive plant presents a phenomenon of sympathic transmission. If one of the leaflets of this plant be slightly burnt with a burning glass, all the leaflets belonging to the same stalk will fold themselves one after another. This motion deserves to be carefully examined; and, in order to determine the part of the stalk by which the transmission in question is operated, M. Dutrochet made several very delicate experiments, from which there results that it is neither produced by the pith nor the bark, but that it takes place exclusively by means of the woody part of the central system. Inquiring afterwards what, in this woody part, are the special organs of the transmission in question, he arrives at the conclusion of its being effected through the medium of the sap contained in the tubes which he names *corpusculiferous*. He has found that the maximum of velocity of this motion of transmission is fifteen millimetres per second in the petioles of the leaves, and only three millimetres per second in the body of the stalk. The state of the temperature does not appear to have any influence upon its velocity.

Light exercises a very remarkable influence upon the irritability of the sensitive plant, the observation of which equally belongs to M. Dutrochet. If a sensitive plant be placed in complete darkness, by covering it with an opaque vessel, it will entirely lose its irritability, and that in a variable time, according to a certain state of depression or elevation of the surrounding temperature. Thus, at a temperature of from twenty to twenty-five degrees of Reaumur, it requires only four days of darkness to destroy completely the irritability of a sensitive plant; while fifteen days of darkness are required to produce the same effect when the surrounding temperature is within the limits of ten and fifteen degrees; so that, on only taking the degrees of temperature in which the sensitive plant can live, it may be established that the extinction of the irritability of that plant in darkness is operated in a period, the duration of which is in the inverse ratio of the elevation of the temperature.

M. Dutrochet has observed that the sensitive plant, deprived of its irritability by means of darkness, recovers it by exposure to light; and that this restoring of the conditions of irritability is more rapidly effected by exposing the plant to the direct light of the sun, than by exposing it merely to the light of day, such as it exists in the shade. From these observations, M. Dutrochet considers light as the external agent from the influence of which vegetables draw the renewal of the conditions of their irritability, or, more generally, of their *motility*; conditions which are subject to deperdition in the natural state, and which thus require to be continually repaired. (*Edinburgh New Philosophical Journal.*)

Recovery from Drowning.—M. Bourgeois had occasion to give assistance in a case where, after a person had been twenty minutes under water, he was taken out, and, by a very common but serious mistake, carried with his head downwards. The usual means were tried unremittingly, but unsuccessfully, for a whole hour, but at the end of that time a little blood flowed from a vein that had been opened, and, a ligature being placed on the arm, ten ounces of blood were withdrawn: the circulation and respiration were then gradually re-established, horrible convulsions, and a frightful state of tetanus, coming on at the same time. Copious bleeding was again effected, after which a propensity to sleep came on; a third bleeding, the following morning, was followed by the recovery of the patient. Hence M. Bourgeois concludes, that the means of recovering a drowned person should never be abandoned until the decomposition of the body has commenced. (*Bull. Univ.*)

An efficacious Means of promoting the Growth of Hair.—A man, between twenty and thirty years of age, of strong and healthy constitution, having a short, curly, and coarse hair, of a dark brown colour, found himself becoming bald. Numerous and large bald spots appeared on the head, and gradually increased till it became perfectly naked, and, as the eyelashes fell out, the man had quite a singular and disagreeable appearance. When the head was closely examined, a short white and sperse down, very similar to a slight degree of mouldiness, was perceptible. At first it was hoped that the hair would grow again, but the sequel proved the contrary, for the individual remained in the same situation two years; when Dr. RADEMACHER advised him to pour French brandy upon the sulphate of copper, and, after it had remained a few days, to wash the bald parts with the solution once a day. In eight days the patient observed the hair had already begun to grow, and in four months it equalled in quantity the original growth, but it was crisp, dry, and stiff, and had not a natural appearance. On the back of the head a spot still remained bald, and the colour of the new hair was of a lighter cast than that of the former. The eyebrows and lashes grew again like the rest of the hair. A year after this the man shed his hair again, but the eyebrows and lashes remained. Dr. R. wished him now to await awhile, in order to ascertain whether it would or would not grow again spontaneously; but to this proposition the patient would not consent, and had recourse to the solution, which produced another growth of blond or light coloured hair; and the spot which before had continued bald notwithstanding the solution, became covered in common with the other parts of the head. This growth had a much more natural appearance than the preceding one. (*Bibliothek der Practischen Heilkunde.*)

INTELLIGENCE.

MONTHLY REPORT OF PREVALENT DISEASES.

THE cold weather of the last month has brought with it a plentiful supply of rheumatism and catarrhs, and some more acute inflammations. The first of these has been, in some cases, extremely obstinate, running into the chronic form, and requiring lengthened treatment. The inflammations have had their seat chiefly in the mucous membranes; and one or two laryngeal affections which we have witnessed have been very severe, only yielding to active bleeding (chiefly local) and to the free use of mercury. Fever, too, has presented itself, generally in a mild, but sometimes in a more aggravated form, with a good deal of abdominal affection.

MONTHLY LIST OF MEDICAL BOOKS.

[*Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.*]

Transactions of the Association of the Fellows and Licentiates of the King and Queen's College of Physicians in Ireland. Volume V.—8vo. pp. 576. Cumming, Dublin, 1828.

Surgical Observations on the Treatment of Chronic Inflammation in various Structures; particularly as exemplified in the Diseases of the Joints. By JOHN SCOTT, Surgeon to the London Ophthalmic Infirmary, and assistant Surgeon to the London Hospital.—8vo. pp. 291. Longman and Co. London, 1828.

Observations on Fever. By R. WADE, Member of the Royal College of Surgeons. Second edition.—8vo. pp. 83. Burgess and Hill, London, 1828.

A Treatise on Gout, Apoplexy, Paralysis, and Disorders of the Nervous System. By A. Rennie, Surgeon, &c.—8vo. pp. 213. Burgess and Hill, London, 1828.

Hints to Young Medical Officers of the Army on the Examination of Recruits, and respecting the feigned Disabilities of Soldiers; with Official Documents, and the Regulations for the Inspection of Conscripts for the French and Prussian Armies. By Henry Marshall, Surgeon to the Forces. —8vo. pp. 224. Burgess and Hill, London, 1828.

Medical Botany, No. XIII.; containing plates of the Inula Helenium, Ricinus communis, Althæa officinalis, and Strychnos Nux Vomica. No. XIV. containing Fraxinus Ornus, Valeriana officinalis, Delphinum Staphisagria, and Daucus Carota. No. XV. Punica Granatum, Santonica Absinthium, Carum Carui, and Convolvulus Scammonia. No. XVI. Linum Usitatissimum and Catharticum, Cephaelis Ipecacuanha, Oxalis Acitosella, and Bryonia Diorca.

⁂ The plates continue to be executed in the same masterly manner as in the earlier Numbers.

METEOROLOGICAL JOURNAL,

From March 20th, to April 20th, 1828.

By Messrs. Harris and Co. Mathematical Instrument Makers, 50, High Holborn.

March	Rain gauge.	Moon.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Varaitions.		
			9 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 *a.m.*	2 *p.m.*	10 *p.m.*
20			44	52	43	29.33	29.07	95	98	W	W	Cloudy	Fair	Sleet
21			45	52	48	29 00	29.00	97	98	WSW	W	——	Hail	Cloudy
22			48	53	36	29.17	29.28	93	98	W	WNW	——	Rain	Fine
23		☽	39	47	37	29.80	29.48	93	92	NW	NW	Fine	Fair	——
24			40	47	37	29.57	29.63	94	94	N	N	——	——	——
25			44	46	33	29.66	29.75	98	98	NE	NE	——	Show'ry	——
26			34	44	33	29.75	29.63	98	98	NE	S	Foggy	Cloudy	Rain
27			43	52	42	29.48	29.33	98	98	ESE	E	Rain	Rain	Cloudy
28			43	48	35	29.56	29.68	96	94	NNE	NE	——	Fair	Fine
29			37	45	37	29.70	29.76	98	98	NE	NW	Cloudy	Rain	Cloudy
30			43	46	35	29.88	30.04	95	95	NE	SE	——	Fair	——
31		○	41	48	36	30.15	30.22	92	92	SE	SSE	Fair	Fine	Fine
April														
1			36	49	36	30.17	30.00	88	88	SSE	S	Foggy	——	Cloudy
2			47	48	37	29.92	29.94	82	84	ENE	ENE	Fine	——	——
3			44	47	36	29.97	29.86	84	84	N	NE	Cloudy	——	——
4			41	47	38	29.81	29.84	88	86	N	N	——	Cloudy	——
5			47	53	39	29.66	29.56	92	97	WNW	ENE	——	——	Rain
6			48	50	41	29.49	29.47	96	96	NE	SE	——	Fair	Cloudy
7	.40	☾	43	49	38	29.24	29.31	98	98	SE	NE	Rain	Rain	Fair
8			48	49	43	29.22	29.10	98	98	SE	NE	Cloudy	Fair	Cloudy
9			46	52	43	29.24	29.34	96	97	SW	SW	——	——	Fair
10			48	48	42	29.27	29.41	98	98	SW	W	Rain	Rain	Cloudy
11			47	58	47	29.61	29.62	92	97	WNW	W	Fine	Cloudy	Rain
12			52	61	51	29.53	29.47	95	95	W	W	Cloudy	Fair	Fine
13			57	57	45	29.37	29.50	95	95	SW	SW	——	——	——
14		●	52	61	47	29.65	29.71	98	98	W	WSW	——	Rain	Cloudy
15			55	56	48	29.63	29.51	98	98	WSW	WSW	——	——	Fine
16	.25		53	58	47	29.45	29.24	94	92	WSW	SW	Fair	——	Cloudy
17			54	59	47	29.30	29.24	97	95	SW	SW	——	——	——
18			49	54	48	29.22	29.34	98	98	SSW	SW	Rain	——	——
19	.90		52	53	45	29.42	29.63	94	98	ESE	E	——	——	——

ERRATA.

P. 339, 8th line from the bottom, *for* bacelar *read* bisilar.
340, 23d ditto — *for* substances *read* substance.
342, 12th ditto from the top, *for* applicable *read* explicable.
344, 19th ditto — *for* rendered *read* considered.
345, 4th line from the bottom, *for* both with a view to diagnosis, *read* with a view both to diagnosis and practice.

THE LONDON Medical and Physical Journal.

Nº 352, VOL. LIX.] JUNE, 1828. [Nº 24, *New Series*.

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL PAPERS,

AND

CASES OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER AUTHENTIC SOURCES.

MOXA.

Cases in which the Moxa was successfully applied. By R. WADE, Member of the Royal College of Surgeons.

Case of Epilepsy.—ELIZABETH M'DOUGAL, aged seventeen, of delicate appearance, had an epileptic fit (for the first time) about four years ago, in consequence, as she supposes, of a sudden fright; soon after which she complained of pain and giddiness in her head. These symptoms continued increasing, and at the end of a fortnight an epileptic fit came on, which for six months recurred regularly twice or thrice in the twenty-four hours, each attack lasting from an hour to an hour and a half. The paroxysms of the disease became gradually less frequent, and entirely subsided in fifteen months from their commencement. For twelve months she had no return of epilepsy, but during that time suffered much from sickness and frequent palpitations, as well as from occasional pains in the head. Shortly after this period, however, the fits returned, their recurrence being attributed by the patient to her having again been suddenly alarmed. From this time her left side grew weaker, and in three months became entirely paralytic.

I first saw this case in January 1827, and the following notes were taken on the 12th of that month: Pulse 112, small and wiry; extremities very cold; constant pain in the left side, occasionally extending to the back; frequent palpitations; a sense of weight in the head, with giddiness and dimness of sight; a coldness experienced in the right half of the brain, this part feeling heavier than the opposite side; the stomach extremely irritable, rejecting the greater portion of food soon after it has been taken; the bowels constipated, and the left side of the body paralytic.

The Nitrate of Silver had been taken in large doses before I saw the patient, as had also the most powerful tonics and antispasmodics. No good had resulted from the application of leeches and blisters. I was informed that the only relief obtained during the last attack had been from bleeding in the arm; but having taken eight ounces of blood (as much as the patient's strength would admit of), and observing that, although by this means the head and side were slightly relieved, the convulsions became more frequent, the pain also soon returning as severe as before the bleeding, a perseverance in the use of this remedy appeared to be unjustifiable.

An attentive consideration of the symptoms led me to ascribe them principally to a want of force in the arteries of the brain, especially those of the right half of this organ; that the blood, consequently, passing but slowly from the arteries to the veins, a degree of stagnation in the circulation would be the result, readily accounting for the cerebral disturbance, irritability of stomach, and other symptoms. It was this view of the disease which induced me to have recourse to the Moxa, thinking that the application of this powerful agent to the arteries supplying the brain might probably stimulate them to a more healthy action than they at present possessed; for those only who have used this remedy will believe the extent of its influence when the heat is applied in a gradual manner.

The Moxa was first used on the 17th of March, and before its application the following symptoms were noted: Pulse 120, small and weak; extremities cold; lancinating pain extending from the scrobiculus cordis to the back; pain with a sense of weight in the head, and coldness in the right half of the brain; dimness of sight; tongue moist and clean; bowels constipated; extreme irritability of stomach; very little sleep is obtained, and that disturbed by frightful dreams; convulsions generally occur from two to three o'clock in the afternoon, and last for an hour or two, giddiness and dimness of sight being usually their precursors; occasional rigors, and frequent palpitations; the action of the heart is very indistinct; the left side of the body paralytic. The patient often imagines the presence of apparitions, at the same time being conscious of her own delusion. Three moxas were used, one over the junction of the occiput with the atlas, and one to each side of the neck: they were allowed to burn slowly, and held between two and three inches from the part, so as only to produce a slight redness of the skin. The relief obtained was immediate.

March 18th.—The convulsions, instead of occurring in the afternoon, as before the application of the moxa, were deferred until three o'clock the following morning, and continued only half the usual period. Moxas again used as yesterday.

19th.—A fit at four o'clock in the morning. Two moxas applied.

20th.—Fit at half-past two o'clock in the morning, which lasted a quarter of an hour; the pain in the head has almost subsided. Two moxas used.

21st.—No fit; a good night's rest; less sickness. Moxas repeated.

22d.—A fit this morning, which lasted a quarter of an hour. Moxas continued.

23d.—No fit; the sickness much abated, and all the head symptoms subsiding. Moxas as before.

24th.—No fit; pulse eighty-eight, increased in strength.

25th.—A slight attack of the convulsions at one o'clock this morning, attributed by the patient to her having been suddenly awoke. Moxas used.

26th.—No fit. Moxas applied.

27th.—No fit. Moxa continued.

29th.—No fit since the 25th. Moxas applied every day.

30th.—A fit this morning, of a quarter of an hour's duration. Moxas used.

31st.—No fit. Moxas repeated.

April 1st.—No fit. Moxas applied.

2d.—A fit this morning, which continued for ten minutes.

4th.—No fit yesterday or today. Moxas used.

6th.—A fit this morning. Moxas repeated.

10th.—No fit since the 6th: no vomiting for the last two days; the side feels stronger. Moxas used every day.

12th.—No fit: moxas repeated. When these were first used, the sensation of heat continued only for the time of their application: it now, however, remains for a quarter of an hour afterwards.

16th.—No fit; side much stronger. Moxas applied every day.

18th.—A fit at seven o'clock this morning, of ten minutes' duration. Moxas repeated.

21st.—No fit: moxas every day. The irritability of stomach is now very slight.

23d.—The patient had yesterday been much frightened. A fit this morning, which lasted for a few minutes. Moxas applied.

26th.—A fit this morning, which continued five minutes. Moxas used every day.

30th.—A fit this morning, of five minutes' duration: moxas every day. Has been able to walk about her room for the last fortnight; her strength is increasing every day.

May 1st.—No fit. Walked about a quarter of a mile yesterday, after having been unable to leave the house during fifty-one weeks. Moxas applied every day.

7th.—No fit; strength increased. Moxas used every day.

15th.—No fit: moxas continued every day. Has complained, for the last three or four days, of pain in the regio cordis. She was consequently cupped, eight ounces of blood being taken, 16th.—Pain has nearly subsided. Moxas repeated.

20th.—A slight convulsive attack this morning. Moxas every day.

26th.—A fit yesterday, in consequence of extreme mental agitation; occasional pain in the head during the last three days. Moxas repeated every day.

31st.—No fit, or pain in the head; the patient walked yesterday for an hour; the irritability of stomach has entirely ceased. Moxas every day.

June 5th.—No fit: moxas omitted yesterday. Slight pain in the head and giddiness today: moxas repeated; they afforded immediate relief.

August 2d.—No fit; the general health much improved. The moxas have been used latterly only every third day. The patient being desirous of change of air, left town this day.

September 17th.—Has had no return of her fits whilst in the country. Her appearance is much improved. She complains, however, of occasional pain in the head and side, also palpitations. Moxas applied. V.S. ad f℥viij.

October 9th.—No fit: moxas used every third day. Pain in the side and palpitations occasionally come on, but rarely last more than a few hours.

November 12th.—No fit: moxas used every third or fourth day.

19th.—No fit; pain in the side during the last week. V.S. ad f℥viij. Moxas applied as before.

25th.—Much alarmed yesterday by a person coming unexpectedly to see her. Moxas used every third day.

December 27th.—No fit since the last report; no pain in the head or side. Moxas used every third or fourth day.

January 20th, 1828.—No fit: moxas occasionally applied.

February 9th.—No fit; health much improved. Moxas used occasionally.

March 1st.—No fit: one moxa applied every fourth or fifth day.

I saw this patient on the 25th of April. Her health was better than it had been for a very long time: the moxa is, however, still continued once or twice a week.

At the time when the affection of the head was most distressing, the immediate relief afforded by the moxa was extremely satisfactory: the patient says, that after its application her ideas became vivid, and she experienced a throbbing in the right half of the head; a gradual warmth succeeded the coldness, and in a few minutes this side felt like the other.

Case of Paralysis.—Elizabeth Cox, aged fifty-seven, was attacked with paralysis of her right side in August 1826. I first saw her early in the following February, and learnt from the patient that she had been subject to pain in the head, and occasional giddiness, for some months previous to the occurrence of the paralytic affection; the power of speech, at first lost, was gradually restored in a few days. The muscles on the right side were quite useless, and scarcely any indications of returning sensation were observed, although the most powerful remedies usually recommended in such cases had been tried. It was this circumstance that induced me, after having persevered, without the slightest degree of success, in the use of stimulating embrocations, blisters, &c., to have recourse to the moxa. Having used this application to the nape of the neck in similar cases with no apparent advantage, I was induced in this instance to apply it to the muscles generally, conceiving that their loss of power might probably at the present time depend more on their own unhealthy state than that of the brain.

March 14th.—A moxa was burnt slowly over the deltoid, and another over the biceps; a slight redness of the skin being produced by their combustion.

15th.—More sensation in the arm: the patient can lift it three or four inches from her sides, although yesterday she had not the slightest power over the muscles. Four moxas applied today, one to the deltoid, and three to the glutei.

16th.—The patient can lift her foot three inches from the ground; she has more sensation in the arm. One moxa to the muscles of the back and loins, and two to the abdominal and glutei muscles.

17th.—Three moxas applied to the same muscles as yesterday. The woman was desired to attempt to walk, with the assistance of her husband: when moving the diseased side, which was effected with a dragging motion, she describes the loss of power as appearing to be chiefly in the lower part of the back and bend of the knee. The foot can now be put flat on the ground.

18th.—Two moxas to the muscles of the back, and one over the rectus femoris. On an attempt being afterwards made to walk, it was evident that the affected side required much less support than yesterday. The good effect of the moxa to the rectus was strikingly observed; for, when the patient was leaning on the right side, there was very little bending of the knee.

19th.—Two moxas to the thigh and leg.

20th.—A moxa to the vastus externus, another to the vastus internus, and another to the patella. The patient has improved much during the last two days: there is now very little bending of the knee, and the attempts to walk are much more successful than before.

21st.—A moxa to the neck, another to the loins, and one to the extensors of the arm.

22d.—A moxa to the knee, and one to the extensors of the forearm.

23d.—Three moxas applied today, one to the deltoid, and two to the extensors and flexors of the thigh. The patient has gained strength during the last four days; she can now raise her hand to her mouth.

25th.—Two moxas applied to the thigh, and one to the arm. Patient walks better.

April 6th.—The moxas have been used every other day. The woman being now able to walk with the assistance of crutches, the moxas were discontinued. She was desired to use the flesh-brush freely, and also to exercise the muscles as much as could be borne without fatigue. From this period her strength gradually increased, and she at present walks very well, having laid aside her crutches some months: there is not, however, so free an action of the muscles on the right as on the left side.

As the description of the case of epilepsy may be considered by many readers more minute than requisite, I beg to observe that my intention, in offering these cases to the notice of the profession, being merely to induce those gentlemen who have similar cases under treatment to give the moxa a fair trial, and not to recommend it as a specific in the cure of epilepsy, (which, in a disease dependent on so many causes, would be absurd,) it appeared far better to incur the charge of tediousness, than, by imperfectly describing the symptoms, to bring the remedy into disrepute, by leading others to employ it in instances perhaps very different to the one in which its powers proved so beneficial. I have only to observe, in conclusion, that the moxa was used in the modified manner recommended by Mr. Boyle in affections of the joints.

68, *Dean-street, Soho;*
May 8*th*, 1828.

JAUNDICE.

Thoughts on the Pathology and Treatment of Icterus, or Jaundice. By N. Chapman, M.D. (Condensed from the *American Journal of the Medical Sciences.*)

The disease approaches in different ways, though, as it usually occurs, it is introduced with much langour, inactivity, and depression of spirits, attended by anorexia, headache, præcordial uneasiness, considerable disorder of stomach, by flatulence and sour eructations, or nausea, or vomiting, and sometimes cramps, or colicy pains. These affections so frequently prove the precursors of the disease, that, from their existence, its invasion may with some certainty be predicted. The bowels are mostly costive, and when stools are procured they are hard, and of an ash or white colour, indicating the absence of bile. Yet in many instances there is a profusion of biliary secretion, with laxative evacuations. The urine is commonly scanty, and of a deep yellow, or brown, or saffron colour, staining linen dipped in it. There is also a very unpleasant taste of the mouth, with thirst, though the tongue is rarely changed.

As the case advances, the skin, which from the commencement is dry and sometimes distressingly itchy, becomes with the adnata variously tinged; the colour appearing first in the eyes, cheeks, neck, and chest, from which points it is progressively spread over the whole superficies of the body. But it is not uniformly diffused. I have seen it restricted to the eyes, and very often embracing only the face. As an anomaly, it is sometimes confined to a longitudinal section of the body: Behrens records a case attended by hemiplegia, where the palsied side was so exclusively icterose that only one half of the nose was coloured. Examples nearly similar are to be met with in the writings of Valsalva, Etmuller, Dupui, &c. It is most commonly of some modification of yellow, from a pale lemon to the deepest orange or saffron hue. Cases, however, are occasionally presented in which it is green, or of a darker or lurid colour, called green or black jaundice.

Not much is to be met with in the treatises on the disease, relating to this variety; and, indeed, the only precise account of it which I have seen is in a short essay by the late Dr. Baillie, so eminently distinguished by the accuracy of his observations. The substance of what he has communicated on the subject I shall notice under the several heads of my inquiry. Excepting the difference in the colour of the skin, the symptoms do not essentially vary from those I have detailed. It is said to occur more frequently in the middle and advanced periods of life than at an earlier age, though occasionally it appears in young persons, and oftener in men than women. The progress of the case is also slower, continuing a year or two, or in some instances for many years; and, though exempt from violent affections, it steadily pursues its course till the powers of the constitution are exhausted.

It has happened, however, in some instances, that the three colours have existed in different parts of the same person. Lanzoni had a patient whose face was green to the throat, while the right side of the body was black, and the left yellow. The green and black gradually became yellow, the black again resumed its colour, and finally the whole was yellow. But to return to the history of the ordinary form of the disease.

Tenderness of the epigastrium and right hypochondrium is now complained of, and fever, more or less intense, ensues; the pulse being full and strong, and sometimes hobbling, and even intermittent. Numerous are the cases, however, in which there is little or no fever, or disturbance of the circulation. The head is not unfrequently affected by pain or fulness, and the disorder of vision incident to the disease is proverbial: my allusion is more particularly to all objects being seen of a lurid or yellowish hue. Shakspeare declares

> ——"To the jaundiced eye
> All things seem yellow."

Nor is medical authority wanting to the same effect, as that of Galen, Sydenham, Boerhaave, Van Swieten, Hoffman, &c. who assert that they have occasionally seen it. But, long and generally as the notion has been entertained, it is doubted by some whether there be any foundation for it, and certainly it is by no means a common occurrence. The fact was, I believe, first denied by Mercurialis, afterwards by Haller; and by Heberden we are told that, of all his icteric patients, he had two only who confessed its existence, and their testimony he distrusted. My own experience is decidedly against it. Whenever it takes place, the humors of the eye must be tinged, and such is a very rare event. But in other respects I have seen the vision much affected by dimness, or becoming double or inverted.

Calculi passing through the ducts of the liver are productive of spasmodic pain in various degrees of intensity, and which is often attended by vomiting so violent that nothing can be retained. The pain, however, is mostly circumscribed to the lower part of the stomach and duodenum, shooting through to the back; though such is sometimes its vehemence that there is an inability to lie down, and the sufferer, in a sitting posture, is actually drawn double. After a while relief is afforded, as is usually believed, by the escape of the calculus, which continues for days, or weeks, or months, or even for years; or, in short, till a second one gets into the same position. Even admitting this explanation as applicable to some cases with such symptoms, it surely cannot be universally received. Many are the instances in which I have known the pain removed by remedies which could have had no tendency to promote the expulsion of a calculus, and under circumstances precluding absolutely the suspicion of its existence. Most probably here it was induced by spasm of the duct or stomach, or duodenum, independently of any calculous irritation; and so analogous are the two affections, that I know hardly any criteria by which they can be discriminated. Coe, Heberden, and other writers, however, deny that icterus ever arises from spasm.

What I have hitherto said relates to the more violent and inveterate shapes of the disease. Every practitioner, however, of much experience has seen it, and with the deepest tinge of the skin, productive of no constitutional disturbance, the appetite, the pulse, the tongue, the secretory and other discharges, continuing healthy; and so little is the individual affected, that he goes about pursuing his ordinary occupations without detriment or inconvenience.

The career of the disease is very different; sometimes speedily submitting to slight remedies, or the spontaneous efforts of nature. Not a few cases of it, however, prove very indomitable, running on for a length of time, and ending in hydropic effusions, or extreme emaciation with hectic fever, or some cerebral affection, as coma, apoplexy, palsy, or convulsions.

Concerning the remote causes of jaundice, these are many and diversified, or such at least have been assigned. Commonly it is ascribed to the entrance of bile into the circulation, owing to an obstruction of the ducts of the liver from inspissated bile, or calculi, or spasmodic stricture, or thickening of the lining tissue of the tubes, or heavy hepatic congestions, or by infarctions of the duodenum, or enlarged pancreas, or by pregnancy.

Torpor or paralysis of the ducts has also been alleged to be a cause, as well as the choking up of the choledochus by worms. Examples are recorded by Beuth, Lieutaud, and Ludwig, of lumbrici being found either in the ducts or gall-bladder of icteric patients; and a preparation of the liver is in the museum of the university of Pennsylvania, illustrative of the same fact, taken from an individual who sunk under protracted sufferings from hepatitis with jaundice. But it is very often brought on by other circumstances. Certain poisons will induce it, according to Galen, who saw "a green colour to take place all over the body of one of the emperor's slaves, from the bite of a viper," which has been subsequently confirmed as to the influence of the virus of that reptile by Fontana; and I have understood the icteric aspect is a very common effect from the bite of the rattlesnake and some other venomous serpents of this country. Lanzoni tells us that "he observed an icterus occasioned by the bite of a cat, which lasted forty days;" and Van Swieten another by that of a dog. Topical yellowness is a pretty uniform effect of the sting of the bee, wasp, hornet, &c. &c. In two instances of poisoning from arsenic which came under my notice, the skin, as well as the serous exhalations in the cavities of the body, was deeply tinged with the hue.

Not unfrequently, too, the disease proceeds from mental emotions. Either vehement rage or terror has excited it, and it has resulted from petulance, grief, anxiety, and other irritating or depressing moral influences. Excessive grief, from the loss of children, caused it in two ladies whom I attended.

Concussion from the explosion of a bomb in a room, I have learned from an authentic source, once excited it almost instantaneously. Twice I have witnessed it brought on by ingesta, without spasm or other gastric uneasiness, except nausea and oppression.

Those who are most subject to the disease are the sedentary, the indolent, and studious, or whose occupations require a curvature of the body; or the dissipated, and particularly the intemperate and debauched. The hysterical and hypochondriacal are exposed to it, and all such as are harassed by the cares, disappointments, or vexations of life. Criminals are said by Haller to be peculiarly liable to it; whether from confinement or mental inquietude, does not clearly appear.

No age or sex escapes the disease. It is incident to infancy, and every subsequent stage of existence. Generally, however, it is met with in those somewhat advanced in life, and more perhaps in males than females, though the difference seems not so great as generally supposed. "Men and women," says Heberden, "are equally liable to this malady: in a continued succession of a hundred patients, I counted fifty-two males and forty-eight females."

The phenomena of jaundice are so peculiar that it can hardly be mistaken for any other disease. It is stated by Heberden "that the most distinguishing signs are a yellowness of the eyes, skin, and urine, and a want of this colour in the stools;" which symptoms are selected by Cullen in his definition of it.

Nor need much be said of the prognosis. Most cases of a recent and functional nature are sufficiently medicable, and especially so as respects those of infancy. Being, however, of long standing, and complicated with disorganizations of the liver or other important structures, or in the old and infirm in any respect, they prove generally incurable, or of very slow or doubtful amendment.

Contrary to common opinion, it is asserted by Heberden that attacks from gall-stones rarely are fatal. Nor, according to Burserius, "is there much reason to apprehend danger when occasioned by hysteria, hypochondriasis, or pregnancy, as it quickly ceases after delivery;" in which latter remark I cannot concur, having witnessed in several instances very opposite results. It has already been mentioned, on the authority of Baillie, that where the tinge is lurid or green, though the case may be protracted, recoveries seldom take place. Melæna, or the purging or vomiting of dark grumous blood, is usually a mortal occurrence, and emaciation with hectic fever, or dropsical effusion, or any heavy cerebral affection, as profound coma, apoplexy, palsy, or convulsions, imports either immediate or remote danger.

We may generally prognosticate favorably where, with improvement in the appearance of the surface, there is a subsidence of gastric disorder, more natural feces, and heavy deposits in the urine. Certain evacuations, as hemorrhage from the nose or rectum, or by perspiration, or from the kidneys or bowels, are reputed to be critical, promptly resolving the disease in some cases.

The appearances on dissection, from the history of the remote causes of the disease which has been given, must of course vary much. The liver, in certain cases, exhibits great diversity of structural derangement, while in other instances it is slightly or not at all affected. In the green jaundice, Baillie affirms "that the liver is often enlarged, hard, and tuberculated throughout its whole substance, though this morbid change of structure is sometimes confined to a single part of it, and occasionally no induration whatever is discoverable in that viscus." Gall-stones are occasionally found in its ducts as well as its bladder, varying as to number, figure, and size. "Frequently, however," says Burserius, "in icteric bodies, no morbid condition of the liver, no taint of the ductus biliferi, and no biliary calculi, are observable." This statement is substantially confirmed by Heberden. The stomach and duodenum very often betray marks of phlogosis or its consequences, by thickening or other changes of tissue. For the most part, the qualities of the bile, cystic and hepatic, are altered in colour and consistency. It has (to use the language of Good,) "been met with acid, acrid, saltish, insipid, whitish, black, green, eruginous, and versi coloured; as dense and dark as elder rob, as tenacious and limpid as the white of eggs, and as crowded and granular as the spawn of frogs."

In very violent and lingering attacks, every part of the interior of the body is tinged of the same hue as the skin. The pericardium, the heart, the abdominal viscera, the blood-vessels, the meninges and substance of the brain, the fat, the cartilages, and even the bones, have been observed in this state. Excepting the milk, all the secreted fluids, as the perspiration, the saliva, the sputum, the semen, the serous exhalations into the cavities, &c. are also found discoloured.

What is the proximate cause or true pathology of jaundice seems not determined. As before intimated, it has generally been ascribed to the absorption, more especially of cystic bile into the circulation, from some obstruction to its passage into the duodenum. That it does not depend on this clause exclusively, is shown by a case reported by Richter, where the disease occurred in an individual who, after death, was found destitute of a gall-bladder; and scarcely less conclusive is the result of an experiment by Portal, in which he tied the cystic duct of an animal without producing jaundice. I have long entertained doubts whether it could be assigned, under any circumstances, to either species of bile. It appears to me that, were it owing to this cause, the disease might at any time occur, or whenever there is bile exposed to the action of the lacteals or other absorbents, as when accumulated in the stomach and small intestines; that, though the stools usually indicate a want of bile, this is not uniformly so; that in many instances of the disease no obstruction existed, on a post-mortem examination in the ducts of the liver, or any other derangement, to account for it; that the peculiar bitter taste of bile is not discernible, and that, were it floating in the circulation, it should tinge the whole mass of blood, which it does not, the yellowness being apparent only in the serum on the separation of the constituents of the blood.

To these arguments it may be added, that in this disease there is very rarely any genuine bile formed. The fluid, discoverable on dissection, as well hepatic as cystic, has scarcely any such properties as to taste, colour, or consistency. It is a peculiar one, the result of a morbid secretory action, caused by the condition in which the liver is placed. Even admitting that absorption takes place, as is contended for, the tinge imparted to the skin should then be of a correspondent colour, and not of the various shades of yellow, which happens. But such a process no more goes on in this case than in retention of urine. The bile must be taken up from the pori biliarii or hepatic or cystic ducts, or gall-bladder, which is contrary to all analogy and fact. Does it ever happen in relation to the urine under such circumstances? Conceding that genuine urine has been discharged from the stomach and other remote parts of the body, of which some instances are reported, they supply no evidence of its absorption. These parts have assumed a vicarious office, as we have frequent occasion to witness with regard to menstruation.

Embarrassed by these difficulties, some of the advocates of the hypothesis which ascribes jaundice to bile have so far changed their ground, as to allege the greater probability of its being introduced into the blood by *regurgitation*, or lacteal absorption. As to the first of these suppositions, its absurdity is so obvious that it has received a very slender support; and, in relation to the second, experience refutes it. By Powell, a recent and authoritative writer on the subject, we are informed that the disease "never accompanies those cases of immense secretion of bile which are called cholera; at least I have never seen it in very violent ones; nor do I know any author who mentions it, even as an accidental symptom, and, if it had happened, it could not possibly have been overlooked. Bianchi," continues he, "gives a case where this circumstance was more narrowly investigated, for he examined the lacteals of a man who had died of cholera, and found that their contents were not in the least tinged by bile." Let me repeat that there is no absorption of bile. The secretory function of the liver in jaundice, so far as concerns the healthy exercise of it, is suspended, as in bilious or malignant fever; and the earliest manifestation of recovery is the restoration of its office.

Denying, therefore, altogether these several hypotheses, I am led to believe that in some undefined irritation of the chylopoietic viscera, arising from any of the remote causes, formerly enumerated, with which the capillaries sympathise, the serum of these vessels undergoes a morbid change, as in yellow fever, and in certain cases of poisoning, &c. The same discoloration which occurs in a part from a bruise happens in all these instances, and is equally referrible to the torpor or impaired vitality of the extreme vessels. The capillaries being in this languid state, no matter how it may be induced, are disposed to secrete a fluid of some shade of yellow or its combinations, thus tinting the surface, &c. We meet with it in the cachexies, &c. It sometimes happens in the diseases of the spleen. I have seen it as an attendant on gastric or enteritic epilepsy, and very conspicuously in the chlorotic affections, where the complexion exhibits all the gradations of hues from the icterose to the green and livid. As strongly is it illustrated in the cutaneous efflorescences, especially when of a weak or typhoid character. Cases of rubeola, scarlatina, and erysipelas, have repeatedly come under my care, followed by this sallowness. But the most striking proof is offered in some of the early eruptions of infancy. These, at first florid, on the weakening of the vessels gradually assume the sallow hue. The act of death is often productive of the same effect. It is indeed a very common occurrence, however pallid before, for the corpse to become all over yellow. But it may be asked, does not jaundice also tinge the internal structure of the body?. Be it admitted, and what can be deduced from it?. Does it not often occur where it cannot possibly be imputed to bile? Moreover, are not the capillaries distributed through every part, the most minute and obscure recesses of the animal machine, and, as the cutaneous, so are the rest affected?

Considerations such as I have presented seem to demonstrate that jaundice is not owing to the absorption of bile, and we are left, as I conceive, to seek for the cause of it in that state of the extreme vessels which has been described. The parent irritation of the chylopoietic viscera, which is very commonly, I suspect, in the mucous tissue of the stomach or duodenum, and not the liver, is extended to the capillaries, and, in consequence of the condition thus induced, changes are wrought in the serous fluid circulating through them, characteristic of the icteric affections. Complexional hues being bestowed in this manner in various other cases, why should it not also happen in jaundice? That the closest similarity exists in the whole of these affections is undeniable, and it remains for those who are opposed to the views I have endeavoured to sustain, to point out the peculiar and distinctive character of jaundice.

It is sufficiently apparent, from the preceding account of jaundice, that the prospect of effecting a cure cannot be the same in the different cases; and, to be appropriate, our remedies must be varied according to circumstances. The remote and not the proximate cause of it we are called upon to remove in many instances, and, from the diversity of circumstances by which it is induced, there can be no uniform or consistent plan of management adopted. Nor is this the only difficulty to be encountered. Cases dependent on the most opposite conditions, and exacting quite a different curative process, are so obscurely designated as to elude all the powers of discrimination. It is on these accounts that our practice is nearly always tentative, and, I fear, too often degenerates even into absolute empiricism.

In the ordinary forms of the disease, where little fever or local pain exists, we commence the treatment with evacuations of the primæ viæ, and emetics are especially useful.

Cathartics are also important, so much so, indeed, as to constitute a very essential, and not unfrequently the only remedies. Beginning with active purging by calomel alone, or with its ordinary adjuncts, the bowels are subsequently to be kept in a soluble state by magnesia, the neutral salts, or other gentle laxatives.

These two classes of remedies operate probably on nearly the same principle, removing causes of gastric or intestinal irritation, and by exciting the liver sympathetically, through the strong impression made on the alimentary canal. In proof of the beneficial tendency of purging in particular, it may be repeated that jaundice is often cured by the spontaneous occurrence of diarrhœa.

The case I have presented, one of the simplest of the disease, is comparatively easy of cure. But it wears a more complicated aspect, and demands a different course of proceeding. Coming on with fever, or a strong full pulse, and topical uneasiness, venesection must be practised, and to some extent, to remove such a condition of the system. Greatly may it be aided by topical bleeding, which is too much neglected. The stomach, the duodenum, and the liver, are here all involved in irritation, congestion, or phlogosis. By a detraction of a few ounces of blood from the epigastric or right hypochondriac region, according to the indication, I have seen signal advantage to result, and, where the means of local bleeding cannot be had, blistering may be substituted. Not less are these means required in those distractions of the head which sometimes prevail for days, and relief not being afforded, prove one of the most afflictive attendants on the case.

What, however, calls for the most vigorous proceedings, is a relentless obstruction of the biliary ducts, from a calculus or the spasm of these or of the stomach, &c. inducing the intense suffering formerly noticed.

The indication here is twofold, to induce relaxation of the duct, &c. so as to overcome the impediment, and to obviate inflammation, which would follow were obstruction or the spasm to continue. To meet these views, we resort to copious venesection, sometimes even *ad deliquium*, to the warm bath, topical fomentations, and to bleeding by cups or leeches, to vesication, to anodyne enemata, and emetics. With regard to the latter, their use must necessarily be precarious and doubtful, to the expulsion of calculi.

These are found of various sizes, from that of a small granule to a hen's egg. It is obvious that, when the stone is so great as not to pass through the duct, vomiting must be mischievous; and it is utterly impossible to ascertain its dimensions. All that we can do is to be governed by the symptoms. Much pain, fever, and general excitement existing, emetics are to be avoided.

Being relieved of this urgent affection, the case next calls for the means which are supposed by many to have the power of dissolving or otherwise destroying biliary concretions. But I believe they operate on no such principle, and it is not easy to explain their efficacy. Be their modus operandi as it may, experience has taught that some of them are useful. Ether and the spirit of turpentine mixed had once a high reputation under such circumstances, though now little or not at all employed. Ever having done good, I suspect it was by their carminative or antispasmodic powers, and not from any efficacy as a solvent or deobstruent. Combinations of the alkalies, in the mild as well as the caustic state, have also long claimed, and perhaps justly, much attention: they are variously administered, though the ordinary shape is that of Castile soap. Equal portions of it, rhubarb, and aloes, with or without calomel, I have often known to be effectual. The common potash mixture, prepared agreeably to the annexed formula, is likewise serviceable in a table-spoonful dose occasionally.* But incomparably the best preparation which I have ever tried is the following popular nostrum.†

Many articles which must act in a very different mode from those alkaline remedies, are entitled to confidence. The acids, mineral as well as vegetable, are among these, and especially the nitric, which is by some highly estimated. Cider or even lemonade, I have known to be serviceable.

As a general rule, however, the treatment consists principally in keeping up a pretty constant impression on the primæ viæ by purgatives, with which view the pill or the syrup of the butter-nut is well entitled to notice.‡

Next, where the case does not give way, an alterative course of mercury should be resorted to; and this failing, the nitro-muriatic acid exhibited internally, as well as applied externally by frictions or as a bath, may be tried. It is at this juncture that the Taraxacum, the dandelion of our fields, has been much trusted to by some practitioners.

Directly the reverse, however, of this plan of management is recommended, consisting alone in the narcotics, as cicuta, hyosciamus, belladonna, the prussic acid, &c. To alleviate spasmodic pain, or to quiet irritation, I give opiates, and for no other purpose resort to narcotics, believing that these are the only purposes which they are capable of fulfilling at this stage of the disease.

Of the icteric cases dependent on disorganised conditions of the liver, I shall here say nothing. Being merely effects of another disease, the cure can only be accomplished by its removal; to point out the treatment of which is alien to my present design. Little more, therefore, remains to suggest as to the management of icterus, than that advantage is sometimes derived from the use of those mineral waters which are found appropriate to the other hepatic derangements. Even a journey to the Springs, and particularly when taken on horseback, is occasionally useful, not probably, as is generally imagined, so much by dislodging calculi, as invigorating the primæ viæ or the secretory action of the liver. It is on the same principle that electricity and galvanism have been applied to the cure of these cases.

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* ℞. Potassæ Carbonas, Gum. Arab. āā ʒj.; Tinct. Theb. gtt. xxx.; Ol. Menth. gtt. x.; Aq. font. ℥iv.

† ℞. Carbonas Potassæ ʒj.; Sapon. Hispan., Gum. Arab. āā ℥ss.; Alcohol dilut. ℔j.—To be frequently stirred, so that the ingredients may be well mixed and dissolved, which will require several days.. The dose is half a wine-glassful, to be taken for three successive mornings fasting; and, if not relieved, omit it for one day, and then recur to the same mode.

‡ The Juglans Cathartica of Michaux.

Too much, however, is usually done in the treatment of this disease. As long as the sallowness of the surface endures, it is thought by many practitioners, and always by the patient, that there is occasion for the continuance of active remedies. But this colour of the skin is merely an effect, over which we have little control; when unconnected with constitutional disturbance may be disregarded, or left to the natural or recuperative powers to remove. From an opposite course, harassing the system, and especially the primæ viæ, by such measures, I have certainly seen a very serious derangement of health induced, and in some instances permanently entailed.

Convalescence is more effectually promoted by a duly regulated regimen, very similar to that in dyspepsia, and, should the stomach suffer, by the moderate use of the vegetable bitters or mineral tonics, and particularly the mildest of the martial preparations, so united with rhubarb as to obviate costiveness. An oppression in the region of the duodenum is not unfrequently felt an hour or more after a meal, owing, perhaps, to an accumulation of food from torpor of that intestine; to relieve which nothing answers so well as a couple of ounces of the infusion of senna and gentian, in the proportion of half an ounce of the former to a drachm of the latter, in a pint of water.

An icterose predisposition being established, and which is generally laid by an attack of any severity, speedy relapses, or more remote recurrences of the disease, are very apt to take place. To guard against these is an important consideration, as the constitution thus repeatedly assailed becomes disordered, and ultimately a train of morbid consequences arises of the most fatal import. It will be well studiously to avoid all the exciting causes, and which are chiefly embraced in want of attention to the bowels, inappropriate clothing, indiscretions in diet, exposure to the fluctuations of weather, inordinate exercises or the reverse, habits of indolence, the indulgence of intemperate passions, or the cherishing of anxieties or cankering cares. This is a prophylactic precept, which should always be inculcated and strictly observed.

PATHOLOGY OF THE BONES.

A Dissertation on the Pathology of the Bones, with illustrative Cases; among others, a Case of the Removal of carious Ribs.
By WILLIAM A. M'DOWELL, M.D.

(Continued from p. 412.)

Internal Necrosis.—I COME now to speak of a less frequent, but a more deplorable, form of disease.

Necrosis of the internal structure, like external necrosis and most other diseases of the bones, is frequently of constitutional origin. In all such cases, the constitutional taint should first be attended to; then due attention should be devoted to local management, which has always been too much neglected, and to which it is the object of this communication to elicit particular attention.

This disease has its origin in the cancelli, and, from the few cases that have come under my scrutiny, seems frequently to arise from cold and moisture so long endured as thoroughly to *chill*, not only the integuments, but the bones themselves; acting, perhaps, by constriction of their extreme vessels obstructing the capillary circulation, or by causing the metastasis of other diseases to their cancelli.

But internal necrosis, from whatever cause arising, as a natural consequence generates the formation of pus, which generally extends the ravages of the disease through the greater portion of the internal cellular structure of the bones, before the pressure of the accumulated and accumulating volume of matter bursts its way through the external lamellæ; and, until this is effected, and produces distention and pain of the soft and more sensible integuments, the patient is sometimes unaware that he is at all diseased, though, on examination, it is rendered evident that the necrosis had been of long standing.

This is the disease described by BELL and COOPER, under the name of spina ventosa; it is BOYER's internal necrosis; and abscess of the tibia of HEY.

"Spina ventosa, or scrofulous bone," says Bell, "is merely a failure of the internal circulation, a total corruption of the marrow, and a consequent loss of the medullary vessels, by which the whole bone dies, is thrown out by nature, or more frequently the limb must be cut off."

Boyer speaks of internal necrosis as but rarely affecting the articular ends of bones; but as a highly dangerous disease when it does, and generally requiring amputation. Two of the subsequent cases were either of this dangerous kind, or what he distinguishes as caries.

Case.—In the spring of the year 1824, Simon Stair, aged thirteen, of hale constitution, never had been sick; went with a party of boys from a brick-yard, in which they worked, to bathe, and staid long in the cold water; shortly afterwards he complained of headache, and was unable to go on with his work. In a few days the headache ceased, and he was taken with excruciating pain at the right knee, which, with occasional intervals of ease, continued without any swelling or discolouring of the integuments, until some time in the following autumn; when a small abscess, like a common boil, appeared on the anterior surface of the tibia, about an inch and a half below the knee-joint, which soon opened, and formed a sinus. After this he suffered no pain, unless in consequence of fatigue or from exposure to cold. When in attendance on Mr. Stairs' family, in December 1825, I was requested to examine this leg, which I did carelessly and without probing, and informed the boy's father that, from the duration of the disease, I conceived there was carious bone at the bottom of the sinus, but that, from its diminutive extent, the scale might soon be expected to exfoliate, and the disease would get well. Carious portions did frequently separate and pass out, but no amendment followed.

On the 6th of June, 1826, Mr. Stairs again invited my attention to this leg. The sinus appeared much as formerly, but the limb was reduced one half smaller than the other, and was becoming very weak, and he grew more fastidious in his diet.

I now laid the bone bare, and made a particular examination. There was a small round hole through the lamellæ, which discovered a considerable loss of substance within.

I advised an operation to remove the caries, which, with the assistance of Drs. Foot and Caruthers, I performed on the 25th, using a common trepan, and Hey's saw to remove the lamellæ, and detaching the carious cancelli with a gouge and scraper: the caries extended so near the joint that a discharge of synovia followed its detachment, and its continuing to discharge afterwards proved a serious impediment to the healing of the wound. Inflammation, however, being suppressed by blood-letting and the antiphlogistic regimen, the wound healed, and the limb had recovered the full size and strength of its fellow in six months.

Case.—William Camper, a remarkably healthy, active boy, nine years old, much addicted to mischief, often, when engaged in sports, subjecting himself to long endurance of severe cold, was, on the 28th of August, 1826, suddenly attacked with severe pain at the right ankle, and the whole leg speedily swelled, without discolouring the skin.

I visited him on the 1st of September. As he appeared always to have enjoyed remarkably good health until within the last four days, and had no recollection of having ever in any manner injured his leg, I could form no just conception of the nature of the disease. To facilitate the distention of the inflamed parts, and thereby alleviate pain, I took away a few ounces of blood, ordered the application of emollient poultices, and a small dose of salts to be taken every other morning.

Visiting him on the 3d, I discovered the cuticle separated from the cutis vera of the swelled part, by a stratum of albuminous substance. Fluctuation was now very apparent, which seemed nearest the surface about midleg, and extended to the tibia: here I made an opening, and discharged the pus. On the 5th, I made a counter opening near the malleolus internus, passed a seton from one to the other along the denuded bone, and bandaged from the toes to the knee, under the apprehension that the disease was similar to that of Rowland's Tom. This treatment was persisted in until the 22d, when the openings were enlarged sufficiently to admit free examination of the bone; a measure the timidity of my patient had heretofore prevented. I now discovered, to my great surprise, that the disease penetrated, as I imagined, to the interior of the bone, there being a hole, with rugged margins, through the external lamellæ, large enough to admit the end of the finger. I now recommended an operation similar to that I had successfully performed on Stair, with the prognostic that, from the limited duration of the disease, it was necessarily of more limited extent.

With the assistance of Dr. Caruthers, an operation was performed on the 30th. The seton was withdrawn, and the bone laid bare, and brought to view from one sinus to the other. All the lower end of the tibia was diseased; the lamellæ near the articulation with the astragalus constituted but a shell, and might have been crushed together by a strong man between the thumb and fingers; the internal substance was as soft as mortar.

Finding this condition of things, I came to the resolution to remove all the diseased bone, even if it extended to the knee; in which I was cordially supported by Dr. Caruthers.

The anterior surface of the tibia was livid, and emitted no blood when scraped, to about half its length up the bone; the posterior surface exhibited evidence of animated organization more than an inch lower down. To obtain a full examination, interior as well as exterior, I took, with Hey's saw, a wedge-shaped portion out of the anterior surface of the tibia, the apex of which extended to the upper extremity of the livid lamellæ, which discovered the sound lamellæ at this place to consist of a mere shell: necrosis of the cancelli extended considerably higher up the bone. The ne-crossing cancelli was worked out with a gouge, until blood, evincing vitality, followed the impression of the instrument.

The division of the integuments was then extended, and the bone was divided with Hey's saw an inch higher than it had been penetrated with the gouge. Below, it was divided near the ankle. A small portion of the lower head of the tibia, though diseased, was left to guard against injuring its articulating cartilage.

Thus, about two-thirds of the tibia was removed. The wound was dressed with adhesive straps, over which a roller was loosely applied; due care was taken to prevent unnecessary inflammation, by bleeding, purging, and the antiphlogistic regimen. The small portion of diseased bone left at the ankle was removed by injected washes, and the whole wound healed in about six weeks.

It is very remarkable that this boy could not recollect ever to have felt pain in the diseased leg, until the date first above mentioned, although the extent to which this disease (of notoriously slow progress) had advanced, afforded assurance that it must have been of many months, if not years, duration.

The rapid reproduction of the lost bone was also striking. I less than six months he was able to walk without crutch or stick, and could not be prevented. At this time (August 12th, 1827,) he conceives the leg as stout as it ever was.

At the posterior superior end of the removed portion of bone were several clusters of callus, discovering the tendency to reproduction, whilst the devastation was yet progressing.

The present deformity of this leg consists in but little else than the scar. The new bone, to the touch, seems about a fourth larger than that of the other leg, and much rougher.

Case.—Betsy Gray, a young woman of scrofulous diathesis, at the age of eighteen, when in delicate health, was, in March 1823, exposed a length of time to inclement weather.

About three weeks after, she experienced frequent pain of the right foot, and was perpetually troubled with uneasy sensations of the foot and leg: the foot regularly swelled during the day, and subsided at night. Such was her case, without much variation, until May, when pain became more intense, the swelling increased, and a sinus formed near the anterior articulation of the os cuboides.

In the spring of 1824, an abscess appeared on the right side of the chest, about the seventh rib, which her attending physician endeavoured to discuss: pus, however, effected its discharge in the following September, first, by a sinus situated about four inches from the anterior end of the rib, and, some weeks after, by another situated at the angle.

Such is the account given by Miss Gray of the early stages of her disease, which continued with but little variation, under different plans of treatment, pursued by several physicians, until March 1827, when she was brought to town, and came under my care. There were at this time five issues from the foot, two from the os calcis, one from the cuboides, and two from the ossa cuneiforme, all communicating with one another: fluids injected into any one of them issued from the other. Through none of those openings was I enabled to examine the condition of the astragalus: all their courses tending below it suggested the hope that it was sound.

As, from Miss Gray's own account of her case, the disease of the foot was ten or twelve months prior to that of the side, I conceived the latter might owe its origin and its maintenance, at least in part, to sympathy with the former; and my recommendation of removal of the carious bones of the foot was predicated on the hope that removal of this source of excitation might produce such a change in the side as would cause the rib to exfoliate or resume healthy action, as in Miss Harvey's case. As there were no symptoms indicating disease of the leg bones, and as there were grounds for hope that the astragalus might be sound, in preference to amputation, removal only of the diseased bones of the foot was advised; well convinced, from my experience of the power of nature in such cases, that bones would be speedily reproduced, or such other substance as would better supply the deficiency than any mechanical contrivance we could substitute for a leg.

April 3d.—With the assistance of Drs. Carruthers, Shanks, Weir, and Preston, all the tarsal bones were removed: they were so completely carious and soft, that they were easily crushed between the thumb and fingers, the astragalus not excepted. No part of their structure retained the natural appearance, but their cartilaginous articulating surfaces. On their removal, the bones of the leg were found so much diseased that the finger met but little resistance in passing its full length up into the tibia; whereupon, with as little delay as practicable, the leg was amputated below the knee: but the disease was not yet circumvented, remaining portions of both bones were thoroughly carious. It was now concluded to remove the remaining portions of the tibia and fibula, and examine the os femoris, to ascertain whether that bone was sound. Finding that it was so, and my patient being much exhausted, I trimmed off a considerable portion of cartilaginous surface from its articular condyles, and, neatly adjusting the ample flap I possessed, I dressed the stump.

No uncommon symptoms ensued; as much of the wound as usual healed by the first intention; the occasional discharge of synovia probably retarded the subsequent healing process; but in six weeks it was completely cicatrised.

Removal of carious Ribs.—Miss Gray's side now became an object of interesting attention: it remained in statu quo. Hectic fever, under which she had already laboured when she first came under my care, was excited and increased by the hot weather; colliquative diarrhœa came on; the discharge from her side, always extremely fetid, grew more so; her strength declined daily.

From many careful examinations, I became satisfied that the caries of one or more of the ribs was to the extent of six or seven inches. From the anterior to the posterior opening, injected fluids readily passed; but not vice versa. The lungs were involved in the disease, as was evident from a troublesome and alarming cough, with purulent expectoration, with which she was, and long had been, much harassed; and which caused me to remark to her that the removal of those ribs would afford a prospect of its relief. She caught at the prospect with avidity, and urged the operation, which she was much encouraged in by the concurrent opinions of other physicians who visited her.

Fearful of the result, her case being a very unfavorable one to success, I for some time parried her solicitations. I very much doubted whether the existing disease in the lungs might not be too extensive to admit of cure even after the caries, which I considered the proximate cause, was removed. Finally, however, I consented to operate.

Never having seen a detailed mode of operating for the removal of a rib, I made my first essay upon a dog, and found the operation less difficult than I had anticipated.

On the 25th of June, 1827, with the advice and assistance of Drs. Caruthers, Shanks, and Jordan, the operation was performed.

An incision was made upon the seventh rib, from the posterior to the anterior sinus, bringing to view about six inches of its convex surface, discovering it to be in a state of complete necrosis. No formation of callus anywhere discoverable. After examination, the incision was carried forward about an inch and a half farther, where the rib appeared sound, bleeding when scraped. Having completely divested it of its periosteum, I here passed an elevator under the rib and between it and its periosteum, and divided it with Hey's saw. The incision was then extended back to the spine, and the rib was there detached from its articulation with the vertebræ. At this part of the operation much care was used to avoid wounding the dorsal nerves.

On farther examination, the sixth rib was found in like manner diseased, and was in like manner removed. Underneath this rib, a little anterior to the angle, a sinus communicating with the lungs was discovered: a hole about the size of a goose's quill, which emitted a great quantity of matter, discharging with more freedom when she coughed.

From reviews I have seen of operations to remove carious ribs, as performed by Cettadini and Richerand, securing the intercostal arteries seems to have constituted a difficulty.

In this operation I was not under the necessity of applying a ligature to any blood-vessel; the intercostals lying between the pleura and the periosteum were made perfectly secure by interposing the elevator, as above stated, between the periosteum and the rib.

After removing as much of the diseased soft parts as was deemed prudent, the wound was closed with the interrupted suture and adhesive strips, covered with lint, and secured with a roller. Inordinate inflammation was completely prevented by two small bleedings, and maintaining a loose state of the bowels.

Examination on the fourth day discovered about four-fifths of the wound to have healed by the first intention. No pain has been complained of since that time; the hectic declined, and disappeared in a few days; the cough has materially subsided, sometimes not troubling her for twenty-four hours together. An issue is maintained by tents, opposite the sinus of the lungs, through which a considerable quantity of matter, which appears to be a mixture of mucus and pus, discharges: this opening will be maintained until the lungs are entirely relieved.

On the 15th August, she left town on a visit to Digu's sulphur spring, a trip of twenty-two miles, which she made in a rough Jersey waggon, without complaining of fatigue. I visited her on the 22d: her cough had mended, her appetite and strength had increased, and her general health and appearance had visibly improved. She rides daily to the spring on horseback, a distance of more than half a mile from her lodgings.

The portions of rib removed had suffered internal necrosis. Their lamellated structure was to a small extent destroyed at several points: viz. at the anterior sinus, at the angle, and at the neck; but most at the angle.

The event of the preceding cases, together with others, affections of bones and joints, not here detailed, treated upon the same general plan, with results equally satisfactory, have induced me to adopt the conclusions, that *dead* bones should be considered and treated as foreign bodies; that they are as foreign to the living bone, or parts with which they are in contact, as though they had been introduced from without; and that they should be removed thence without delay, even though it were an entire bone, for, the greater the oppression, the greater the necessity for relief.

Were a surgeon called to a patient who had stuck a snag of wood, or (to render the analogy more palpable) say a sharp piece of bone, deep into his flesh, what would we think of his awaiting its removal by the efforts of nature? Yet we know that, after a time, (if in the interim the patient should not die,) her process would effect its expulsion. Inflammation would expand and relax the surrounding parts, which would presently terminate in mortification or suppuration: if the latter, the outlet would be enlarged and lubricated by the discharge, and the snag, after a tedious interval, would be forced out by the pressure of granulations formed within.

Between the cases of a carious plate under the periosteum and the snag in the flesh, I conceive a strong analogy to exist, though differing in the following particulars: the former is in contact with parts less sensible, and endued with less active vitality; consequently the processes of inflammation and relaxation, with their necessary consequences, mortification or suppuration, or both, are of slower progress, less painful, and more insidious.

The snag, having no obstacle to its exit except from superincumbent integuments, is more easily pressed out by the granulations underneath, than the carious plate, which, together with the same obstruction, is confined by the connecting processes of the lamellæ, rendering force requisite to detach it, even after the integuments are removed.

Upon the whole, I can conceive no other reason for preference of delay in the one case to the other, except that in the case of caries the progress of disease is slower, more sufferable, and less immediately threatening to life. Nature will frequently accomplish relief in both cases; but oftener, I believe, and with more facility, from the snag than from the caries. But why in either case await for months a result that a little skill would, with less hazard, effect in a moment? *

HYDROPHOBIA.

Proposal to employ heated Air in Hydrophobia.

NEARLY all the remedies with which we are acquainted have originated from some accident, which an observer has taken advantage of, and, by a reflective operation of the mind, has perceived to be applicable, if its effects were moderated, to the cure or alleviation of some disease or disorder of the human body. This method of reasoning, and its consequent application, is and has been productive of much good, and forms a rational ground of medical practice, even if pursued without any connexion with anatomy, physiology, or any other branch of the science of physic. But a fanciful and sort of guess application of remedies must necessarily, in general, be attended with so little benefit, and make an inroad for so much mischief, that I feel the full force of venturing the proposal of one upon such basis, and can easily foresee the ridicule which may arise from its failure. There is, however, in the instance I am contemplating such a freedom from evil in its consequences, and the case in which I propose it is so totally out of the reach of the present aid of medicine, that it becomes in its result at most an error in fancy, while it will, if successful, be a means of preserving the lives of those who are decidedly out of the reach of medical aid. It would, therefore, be an inhuman error to hold back the present proposed remedy, merely because, in advancing it, there is only a glimpse of hope, instead of a sanguine expectation.

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* The American Medical Recorder, No. xli.

There is a disease which is manifestly communicated by the introduction of a powerful poison into the system. When this poison has given rise to a certain phenomenon, it is invariably productive of death. This disease, like most others, has its name from its prominent symptom, which in this instance is a dread of water, (hence the term Hydrophobia.) Every remedy which has been employed here, and I believe nearly all the articles of our long list of materia medica have been essayed, has deceived the flattering hope of the unfortunate, who has been driven to a treacherous repose upon their power. In these cases, anatomical investigation affords but little light, since the exposures of the scalpel display scarcely any two cases alike; and, although traces of inflammation are discoverable, I believe, in all the cases examined, yet its seat is so uncertain, and its indications sometimes so obscure, and, when rightly guessed at, customary remedies prove so inert as to set at defiance the usual advantages of scientific procedure in common circumstances. Pathology of the disease there is none, and physiology affords not even data to explain the phenomenon which gives rise to its name. It may be urged that, if this should be explained, the disease would be understood; but I conceive this is a mistaken notion; for, although the mental emotion of fear, as connected with water or any other undulating body, is the most distressing symptom to the sufferer, yet it would not appear that this dread is the cause of death. *On the contrary, this feeling subsides, I believe, as dissolution approaches.*

Without encumbering the subject further with crude observations to no useful end, it is my wish to propose, through you, to the public, that future cases of this disease may be submitted to the full influence of highly heated air, so as to produce from the skin and lungs a copious exhalation.

This treatment affords to my mind a hope of success, because, in all the more virulent and manifestly contagious diseases, as plague, small-pox, measles, and scarlatina, there is an effort to throw off the poison by cuticular action; and, in the plague, those who get bubo and cuticular disease early do for the most part recover, and, in some instances, *spontaneous sweating has appeared to carry off the disease.*

The abuse of language is often the origin of error, but the origin of words is always in absolute truth, because it is merely the absolute and imperious application of a term to denote a fixed fact; and therefore, in attaining to the precise and exact meaning of a term in its original import, we must always acquire a knowledge of the determinate fact to which it was originally fixed as a denotement.

In the histories of nations, it appears well established that the arts and sciences rise, flourish, and decay, in a mutual conformity; and hence, where the lasting monuments of the former show the perfection to which they have been cultivated, it is at once known that the sister sciences cannot have been neglected, and the degree of excellence in the former is plainly indicative of the eminence reached by the latter. Hence the lasting monuments in art of the ancients are the powerful witnesses of their superiority in science.

Now, our terms of science, more especially of medicine, are derived from the same source as the admired remains of ancient sculpture; and the knowledge of medicine attained to by those people (the ancient Greeks,) was, in all probability, (whatever the moderns may think to the contrary,) equal to their success in the arts.

There is, derived from the Greek language, a word now rarely used by the profession, which lexicographers say means *expeller of poisons.* This word is *Alexipharmic,* and all the drugs comprehended under that term have the property of producing sweat. There would appear, therefore, some reason to believe that the ancients had a knowledge of the means of expelling poisons, and, if we have a correct application of their term to the same class of medicines which they used, it must have been by sweating; and hence an argument is raised upon their superior knowledge to the use of a sudatorium in the cure of hydrophobia.*

But not to trust to authority for what argument should enforce, it may be worth the time to inquire what would be the dictates of nature (that is the disease) to remedy this fatal and distressing evil.

The natural and evident cause of this disease is the introduction of a powerful poison into the system: the natural and evidently rational method of cure must be the expulsion of that poison, unless some medicine were known (and there is none) which possessed the property of rendering innoxious that virus. The expulsion of a poison mixed with the blood cannot, like poisons in the stomach or bowels, be removed by emetics or aperients, but must be cast off by the excretory pores of the blood-vessel system; so far the sudatorium is, in the simplicity of genuine philosophy, clearly indicated as the first point of external cure.

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* The name of the herb Contrayerva (or counter-poison) must have originated in its actual or supposed power, and this medicine also is a sudorific; as is also the plant Serpentaria, supposed to be efficacious against the bite of serpents.

To moderate the leading symptom of this disease, the dread of water, nothing appears more rational than to induce the powerful counter-desire thirst; and this the sudatorium, by its abstracting the fluids of the body, will tend powerfully to produce: so far the heated air would seem clearly indicated by the dictates of the disease.

I have before stated that there exists no pathology of the disease which is deserving of attention, and the leading phenomenon of the disease has not an explanation even plausible; but it does probably depend upon that concomitant morbid irritability of the body which is so peculiar to this kind of poisoning. There is, perhaps, no means of relieving an undue irritability of body, not dependent upon actual debility, so efficacious as the sudatorium: and hence it would appear also indicated by the nature of the disease itself.

Even if the disease be inflammatory, although the traces of inflammation are, I believe, scarcely sufficiently marked to account for death, the sudatorium would be highly useful, and strongly indicated, inasmuch as it is a powerful antiphlogistic remedy, especially in erratic disorder of the inflammatory kind.

In a state where impressions so trifling as, in the ordinary circumstances of life, would be unheeded, do excite so powerfully the animal frame, a rarer medium, as less powerful in conveying impressions, would be enforced by the salutary dictates of nature, in the same way as she seeks cooler air in fever, and warmth in debility. And hence it is probable that the sudatorium would not only be useful, but perhaps the most pleasant application to the feelings of the distressed in the disease.

These, sir, are the circumstances which influence me in hoping benefit from this practice; and I beg, through you, to submit them to the consideration of the profession at large, that they, with whom they may weigh powerfully as they do with me, may put the opinion to the test. The life of a private individual may pass without affording a case in point for experiment, so that to wait the experience of myself upon a subject so important to my fellows; would neither be justifiable nor humane; and this proposed remedy may as well be fairly and fully tried, as to suffer the miserable subjects of a hitherto universally fatal disease to lie, as they do, curious exhibitions in our hospitals for an unerring prognosis of death. It appears to me that the sweating should be long, frequent, and indeed carried to an extreme point. Z.

MIDWIFERY.

Cases in Midwifery. By RICHARD LONG, M.D. Surgeon to the Arthurstown Dispensary.

THERE is, perhaps, no branch of surgical science in which promptness of decision and firmness of purpose are more required than midwifery. In submitting the following cases to the public, I have no new-fangled theory to advance or bolster up. If, in the moment of danger, a recollection of them may inspire hope where all appears hopeless, and give nerve to the operator where every thing would point out despair, my wishes will be fully accomplished.

In April, 1826, I was called to Mrs. F., aged thirty-four years, who was in her fourth accouchement, her former labours having been uncommonly favorable and quick. In the present instance, she had been in labour four days; there had been an arm presentation; the arm was removed, the thorax perforated, its contents evacuated, and, as it afterwards appeared, the crotchet had been passed through the thorax, and fixed between the first and second cervical vertebræ. In this position the unremitting exertions of the gentleman in attendance; a powerfully strong man, had been used for hours to accomplish delivery without effect. On my visit, the uterine action continued powerfully strong, so as to preclude any attempt at turning with safety; it was also clear that delivery could not be accomplished while the body and head of the child remained in the present posture; I therefore sought for the other arm, which was removed, and immediately the remaining portion of the body was expelled with violence; but, to my great dismay, the head was separated, and remained within the uterus. A moment's hesitation, and all was lost. Before the uterus had time to contract, I introduced my hand, and firmly fixed the head against the side of the uterus, my colleague at the same time steadying it by external pressure: the head was then perforated, and extraction accomplished by the crotchet more easily than I could have imagined.

In June, 1827, I was again called to the same patient, who had been some hours before delivered, naturally, of a still-born child; the placenta was retained without hemorrhage. On examination, a firm hour-glass contraction was found in the centre of the uterus: this, however, was not the cause of the placenta being retained, as it was found firmly adherent near the fundus uteri, and required a constant and tedious exertion with the fingers to effect its separation piece by piece. The part of the uterus to which the placenta adhered had a grisly semi-cartilaginous feel, such as I have before found the uterus to acquire when injury had been sustained in former labours.

I was informed that this woman appeared to go on well for several days after her confinement, but, from some mismanagement, peritoneal inflammation was produced, by which she was carried off.

Practically speaking, the notions entertained of the possibility of unassisted delivery being accomplished in arm presentations, either by spontaneous evolution of the fœtus, or by nates and shoulder being protruded together, have been productive of much injury.

In arm presentations, decision is every thing: if assistance is sought where the pelvis is at all tolerably formed, the child can be always safely turned, no matter how violently the uterus acts, provided the shoulder and chest are not wedged in the strait of the pelvis. On the other hand, if the shoulders and breast of the child are forced down, and the capacity of the pelvis is narrow, or only of ordinary dimensions, I conceive it is a useless sacrifice of life to allow an unfortunate woman to exhaust herself by protracted pains, under the expectation of evolution of the fœtus, or birth by doubling of the body.

Uterine Hemorrhage.—In November, 1827, I was requested to visit Mrs. W., aged thirty-nine years, who had been delivered two hours before of her eighth child. I found her to all appearance dead: there was no perceptible pulsation or breathing, except a slight convulsive heaving of the chest; the eyelids were half opened, and the eyes turned up, as in instances of recent death; the lips were colourless, the face cold and clammy, and the extremities quite cold. On examination, the uterus was found flaccid and uncontracted, and the woman drenched in blood. The placenta had been removed.

The hand was instantly passed into the body of the uterus, and, by frequent friction of its inner surface, muscular contraction was excited. The nostrils were stimulated by hartshorn, and warm wine and hartshorn were poured down the throat, apparently without any effort of deglutition by the patient. Warmth was applied to the extremities, and a large sheet, quadrupled, and wetted in the coldest spring water, was placed over the abdomen. For some hours, the success of those means, although steadily persevered in, appeared extremely doubtful. As the uterine action, however, was restored, the vital spark appeared to rekindle, and animation was slowly but perfectly established. After several weeks of suffering from extreme debility, the patient has been able to resume the care of her domestic affairs.

In the practical application of the history of the foregoing case, it may be asked what would have been the result had the attention been directed to the administration of stimuli and the transfusion of blood, instead of endeavouring to remove the debilitating cause by mechanically exciting uterine contraction? [illegible] been the same

Arthurstown, co. Wexford; March 7, 1828.

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VACCINATION.

Observations on Vaccination. By Medicus.

I feel myself indebted to you for the fair and liberal manner in which you gave insertion among your valuable pages to some passing remarks of mine on Small-Pox and Vaccination. These observations, though fugitive, were neither rash nor unadvised. They had reference chiefly to one point, by far the most important in the whole range of this highly important and interesting subject, whether we look to the literary, the medical, and the natural history of both affections; or to the prophylactic power of the variolæ vaccinæ in producing, first, an immunity from, and next a total extermination of, the malignant variolæ, or small-pox: that one point to which I now allude, and on which I would for the present seek to fix the attention of your readers, is the *identity* of small-pox and cow-pox; that is to say, that they only constitute species or (if you will) varieties of the same generic disease.

The immense and salutary influence which, with a practical view, such a conviction must produce throughout the world, need not be insisted on to you, sir, or to your intelligent readers. It will go far to elucidate, if not altogether explain, the many apparent anomalies that have hitherto been too generally deemed inexplicable; and it must restore and render complete that confidence in the preventive security derivable from vaccination, a confidence so necessary to the public safety. It was this conviction that at once animated and guided Dr. Jenner in his inquiries and his prospects, and led him on triumphantly to his oft-repeated declaration, "I have fixed the vaccine on a rock from which it never can be shaken." The basis on which this conviction rested, originally firm, has been (if I may so speak) augmenting in strength and solidity during the lapse of thirty years: Dr. Jenner himself, in his second and third Treatises on the Variolæ Vaccinæ, presses the belief; and his biographer, Dr. Baron, has stated and put forward the proofs in a way, to my mind, not merely convincing but incontrovertible.

I may not, however, dwell more at large on your space, Mr. Editor, or on the attention of your readers. I come at once, therefore, to the *experimentum crucis;* and, if the matter of fact be once established, we need no further evidence. It will be found in the Asiatic Journal for February 1828, No. 146, page 123, vol. xxv. and runs in these words: "A Bombay paper states, on the authority of a letter from Mocha, that, from the vaccine matter having lately failed in Egypt in a great many instances, medical gentlemen were led to institute certain experiments, by which it has been discovered that, by inoculating a cow with small-pox matter from the human body, fine active vaccine virus is produced. At the time the letter was written, there was a Greek child at Mocha that had been successfully vaccinated with matter direct from the cow, produced as above mentioned, and the virus taken from its pustules had acted with the best effect on several other children at Suez, where former attempts had failed."

May 12th, 1828.

INTROSUSCEPTION.

Fatal Case of Intus-susception in a Child. By EDWARD HUMPAGE, Esq.

I WAS summoned, on the 6th March, to visit a child, about two years and a half old, reported to be in a fit. On arriving, I found the little patient just taken from a warm bath, and recovering from what appeared a spasmodic affection more resembling tetanus than any thing else. I administered some warm water, and, finding that the child had eaten a hearty dinner, prescribed an emetic mixture, containing Ipecac. comp. ℈j. with Ant. Tart. gr. ij., to be given in divided doses.

I was again called in half an hour, another spasm having come on. The family physician had now arrived. We immersed the child in warm water, and agreed to open the jugular vein, the emetic not having produced any effect. After about six ounces of blood had flowed, the rigidity ceased; then followed occasional eructations, but no vomiting or evacuation by the bowels. The child lay quietly, drank frequently of warm water, and seemed in all respects relieved. This state of things was, however, but of short duration; for in about three hours another spasm came on, which the bath and two turpentine clysters in some degree relieved, (the child having after them several stools;) but constant subsultus tendinum followed, and death closed the scene in about seven hours from the first attack.

On examining the body, we found the lining membrane of the abdomen, and all the viscera, perfectly healthy, excepting at the commencement of the ileum, to which spot our attention was directed by the increased vascularity of its mesenteric blood-vessels. On more minute inspection, we found there was an introsusception downwards, of about one inch and a half in extent. I easily withdrew the included portion of gut, which (if I may use the expression) was not strangulated, but incarcerated; its villous and peritoneal coats were highly injected with red vessels, the upper portion being much contracted, the lower somewhat more than its usual size.

That this child died from the invagination of intestine, I think is very evident; and the urgent symptoms it produced teach us the remarkable sympathy of the ganglionic with the spino-cerebral system of nerves, the irritation commencing in the former, and extending itself through the whole locomotive system. The organs of deglutition were but partially affected: nor is this circumstance surprising, when we remember the superadded nerves which supply this part. The absence of vomiting is not easily accounted for, cases of this sort being generally accompanied by this symptom. On inquiry, I find this child had, some few months ago, an attack of colic, with vomiting and purging, which probably was the effect of invagination to a slight degree; the intestine resuming its natural position by the increased action of the stomach and bowels, leaving a predisposition to a recurrence of the disease, which probably was favored by the quantity and quality of the food taken on the day of the fatal attack.

Bristol; March 10th, 1828.

BRITISH OPIUM.

On the Properties of British Opium. By A MEMBER OF THE COLLEGE OF SURGEONS.

HAVING been in the habit for several years of using British opium in my practice, and being satisfied of its great superiority to the Turkey opium in ordinary use, I beg leave, through the medium of your widely circulated Journal, to call the attention of the profession to the following facts respecting it.

It is superior in point of purity; the British being free from that admixture of foreign substances which are always found even in the best specimens of the Turkey.

Its *anodyne* properties are quite equal to those of the best Turkey, while its *narcotic* or deleterious properties are much weaker. Thus, I find one grain of the substance, or fifteen minims of the tincture, a sufficient dose in ordinary cases; but herein its superiority is manifest, that when the urgency of symptoms requires it, three or four grains may be given without much risk of its producing the deleterious effects which would be almost certain to follow the same dose of Turkey opium. I have given it to the extent of from three to six grains in the day in a great number of cases, and I only recollect two in which it had any unpleasant effect, while in most instances it has produced decided relief of pain, without exciting the least headache, vertigo, or confusion of intellect. A friend of mine, who is in the habit of taking one or two grains of opium occasionally at bedtime, complained to me of the headache which he always experienced the next day, particularly if any thing occurred to disturb his rest after a dose. I gave him a few pills of the British opium: he was astonished at the effect of them, declaring that they gave him comfortable rest, without producing any thing like the degree of headache which he had always experienced before.

It would be gratifying to me, and useful to the profession, if Mr. Battley, or one of your chemical correspondents, would ascertain whether this effect of the British opium arises (as I suspect it does) from its containing a larger proportion of morphium, and a less proportion of narcotine than the Turkey. Be this as it may, I was gratified a short time ago to observe, from a report of the French Institute, that they had come to the same conclusion respecting opium grown in France, as I had done respecting the British.

I could cite many cases in confirmation of the opinion I have advanced, but I hope I have said enough to induce medical men to give it a trial. I fear, indeed, that the present low price of Turkey opium will tend to prevent the cultivation of the British; but I am persuaded, if the profession were fully aware of the superior virtues of the latter, they would prefer it even at some advance of price. I consider, indeed, that its value may be stated to be at least one-third more than that of the best specimens of Turkey. As it is not always to be obtained in the market, I will add for the information of such of your readers as may wish to try it, that I procured it at Messrs. Winstanley and Son's, in the Poultry.

INDOLENT BUBOES.

Cases of Indolent Buboes cured by the use of the Tobacco Ointment.

By Dr. GRAHAM.

JAMES SMITH applied to me on the 5th of July, 1827. His complaints were phymosis, purulent discharge from the glans and prepuce, and an indurated bubo in the right groin. He stated that he had been five months ill, and that the first symptom which presented itself was gonorrhœa, and shortly afterwards the other complaints made their appearance. He also stated that he had observed no alteration in the size of the bubo for two months. I directed the antimonial solution and black wash. In the course of a few days, the discharge and swelling were entirely removed, and on retracting the prepuce there was no ulceration whatever. He stated to me that mercurial frictions, leeches, and cold lotions, had been used two months before without any good effect in dispersing the bubo. I ordered him to have a blister applied, and afterwards to have it dressed with the Ung. Hydrargyri, for the purpose of promoting the discharge and preventing its healing.

In the same manner four blisters were applied without any diminution in its size. I was then induced for the first time to try the effects of the tobacco ointment, from a hint given me of its virtues by Professor M'Clellan, of Philadelphia. I ordered him to rub in the size of a walnut of the ointment over the bubo three times a day, and, to my astonishment, in the course of ten days it was completely dispersed.

Patrick Burns applied to me on the 12th of July, 1827. His complaints were—a superficial ulcer on the prepuce, without induration; a large bubo in the right groin; and a papular eruption which extended to almost every part of his body, appearing very similar to true syphilitic blotches. He stated that he had been three months ill, and that he had undergone two courses of mercury without any good effect whatsoever on his complaints. He said that his physician had applied leeches three times to the bubo, followed by frictions with camphorated liniment, without any effect. He complained of severe pains in his shoulders and other joints. As there was no febrile action present, I directed for him the decoction of sarsaparilla, together with the antimonial solution. I also ordered him to keep lint moistened in the lotion of calomel and lime-water to the sores on the penis.

18th.—The eruption was on the decline, and his pains were considerably relieved.

22d.—The eruption had almost disappeared; there was scarcely any pains in his joints, and the sore on the penis had healed. In the course of this time the bubo evinced neither a tendency to disperse nor to suppurate. I ordered him, as in the former case, to commence rubbing in the tobacco ointment, which completely dispersed it in the course of twelve days.

William Ryan applied to me on the 20th of July, 1827. His complaints were—excoriation of the glans and prepuce, with purulent discharge; a small ulcer on the prepuce, without induration; a large bubo on the left groin; an eruption of papulæ on his face, arms, and neck; enlargement of the tonsils, with difficulty of swallowing; and pains in his shoulders and knees.

He said he had been five months diseased, and that he had been repeatedly salivated. I directed the same medicines as were employed in the preceding case with the same happy effect. The bubo was completely dispersed by the tobacco ointment in the course of two weeks.

HOSPITAL REPORTS,

(Principally condensed from various Periodical Publications.)

GUN-SHOT WOUND.

Case of Gun-shot Wound of the Leg, in which five-sixths of the Structure at the Seat of Injury was destroyed, successfully treated, the Limb being preserved. Reported by James A. Washington, m.d. House-Surgeon of the Pennsylvania Hospital.

Charles Ulary, aged eleven years, was admitted, under Dr. J. R. Barton, into the Pennsylvania Hospital, on September 1st, 1827, with a recent gun-shot wound of the leg. A fowling-piece, which he had handed across a ditch to its owner, having been accidentally discharged as soon as received, with its muzzle within two feet of him, its contents had passed entirely through his left leg, just above the ankle-joint, the joint happily escaping uninjured. He was brought into the institution before any application had been made to the part, but not until a few hours had elapsed after the accident, as he resided at the distance of four miles from the city. The wound presented the appearance of a large, ragged perforation, passing through the limb horizontally, and from side to side. The orifice on the inner side of the leg was at least three inches in its vertical, and two inches in its horizontal diameter; but the size of the outer orifice was rather less: their margins were irregularly lacerated, as was the whole surface of the wound. The contents of the gun having passed through the limb from so short a distance, a very considerable destruction of the part had taken place, and it was estimated that five-sixths of its structure, at least, had thereby been carried away.

The parts removed consisted principally of more than an inch of the tibia and fibula, their fractured ends, above and below, being that far removed from each other; also of the corresponding portions of the tibialis posticus and the long flexor muscles of the great toe and the small toes, as well as of the fatty matter interposed between them and the tendo Achillis. The skin covering the limb at the seat of injury had, of course, been in a great measure destroyed. The parts that were left in front of the wound consisted of a sound strip of skin about two inches in breadth, and of the muscles which it covered, the peroneous tertius, tibialis anticus, and the long extensors of the great toe and the small toes, which had not been materially injured: behind there remained the tendo Achillis, with another sound strip of skin, but barely sufficient to cover it. The long and the short peroneal muscles, situated on the side of the leg, and whose tendons pass together, behind the malleolus externus, had also escaped without being seriously injured, and were seen crossing about the middle of the external orifice of the wound, the silvery hue of the tendons being still preserved. But what was the most important of all is, that the anterior tibial artery was found uninjured, in consequence of that portion of the periosteum covering the anterior part of the tibia being left, though but barely, and with a film of bone attached to it, here and there.

A consultation having been held between the attending surgeons of the hospital, Drs. Barton, Hewson, and Parrish, they determined, in consequence of the youth of the boy, and of the circulation being still carried on by the anterior tibial artery, as was manifested by its pulsation and the warmth of the foot, to attempt to save the limb. Although, from the lacerated character of the wound, the hemorrhage was rendered much the less profuse, particularly from the large vessels, yet, from the extensive surface that had been exposed, sufficient bleeding had taken place to produce a very decided effect upon the system. When the boy was admitted, his countenance was extremely pale, but reaction had, in a measure, ensued, and his pulse possessed tolerable force, though very quick in its beat.

The immediate application to the wounded surface, which was suggested by Dr. Barton, and had never before been used, as far as we know, consisted of wheat-bran. His limb was placed upon a soft bed of cotton previously spread over with bran, after being protected by oilcloth, in a kind of box, open at one end and above, and with side lids attached to it by hinges, and used for fractured legs in the hospital. The foot, which had before laid upon its outer side, from the very considerable destruction of the continuity of the wounded part, being properly adjusted, the cavity of the wound was filled with the bran, and the limb for a distance above the wound, as well as most of the foot below it, enveloped in the same article. When the character of bran is considered, it will be understood how very well adapted it is to the dressing of a wound of this nature. It serves to absorb the discharge, and is thereby, in part, converted into a very good poultice; while, by the compression thus induced upon the wounded surface, it will prevent any inordinate hemorrhage, at least in a case so favorable to its applicable as the present. For the first five days the bran was only partially removed, and more fresh bran applied; so that the great pain that would have been produced by daily moving the limb to dress it was obviated.

On the sixth day, the boy being lifted towards the foot of the bed, in order that the box might project beyond it, and over a tub placed beneath, the wound was entirely cleansed, by means of a syringe, with warm water, the bran being easily washed away. On this day, the first after the accident that the wound had been fully exposed to view, its surface, which had been killed by the severity of the injury, presented a darkish aspect, owing to the sloughs not yet having separated. Considerable swelling had taken place at the part, in consequence of the inflammation which had supervened. The discharge which had as yet been seen appeared principally to consist of a thin serous exudation of a reddish hue; only a slight trace of pus having up to this time been observed.

By the eighth day, the upper portion of the wound, or that nearest to the knee-joint, had cast off its sloughs, and the exposed granulations presented a very healthy appearance; while the sloughing from the lower portion, or that nearest the foot, had not taken place: this difference being obviously attributable to the diminished circulation in the lower part of the wound.

On the fourteenth day, the wound exhibited a healthy appearance, but the granulations were less florid than previously. On the twenty-fifth day, the cavity of the wound was observed to be considerably diminished by the luxuriance of the granulations, and the contraction that had taken place in the limb; the loss of bony structure allowing it to be thus diminished in length. On the twenty-eighth day, the cavity was still more reduced in size, and the fragments of the tibia had come into contact, from the contraction of the limb above noticed: the upper fragment was spear-pointed, and consisted of compact structure, while the lower fragment presented several points, or a very uneven surface, and consisted of the cellular structure of which the extremities of the long bones are formed. In comparing the legs together, it was found that the injured limb had been shortened rather more than an inch. The upper and lower fragments of the fibula were also found in contact, but, rather less of this bone being removed than of the tibia, it will be perceived that a slight curvature must have taken place at the seat of injury, in order that the fragments of the bones might thus meet. This bend of the limb inwards was, however, but slight. In consequence of this disposition of the parts, the upper fragment of the fibula projected too much outwards, and, from its outer surface being denuded of periosteum, its white appearance rendered it very conspicuous. Although the fragments had now come into contact and jutted against each other, still the foot required support to prevent its falling to one side.

On the 9th of October, five weeks and a half after the accident, the process of exfoliation was, for the first time, observed to have been completed in a part of the exposed surfaces of bone. It has been mentioned that the lower fragment of the tibia consisted of spongy structure, and in a portion of its exposed surface, though the supply of blood to it was of course, from its situation and the nature of the accident, much less abundant than to the more compact structure of the upper fragment, yet exfoliation here first occurred; a circumstance ascribable to the greater vascularity of the spongy structure of the bone.

From this time to the present date, the process of exfoliation has gone on, and is now very nearly completed: bits of bone thus cast off, or loosened from the living structure, have from time to time been removed. The depth to which the surfaces have exfoliated has in no part been great. The formation of osseous matter has also taken place so as to unite the fragments above and below, and for so long a time, and to such a degree, that for a month past no motion at the wound could be perceived.

It was mentioned in the previous part of this paper that a portion of the anterior periosteal covering of the tibia, with small scales of bone attached here and there, had been saved. This remnant of periosteum has been a prolific source of the osseous secretion. There is, correspondent to this portion, a protuberance consisting principally, as indicated by its hardness, of osseous matter, while the parts of the tibia above and below appear to be very nearly in their natural relation to each other as regards direction. The cavity of the wound has for several weeks been filled up, with the exception of a sinus, in which a small probe may be introduced, that is left for the exit of the bits of bone which are from time to time cast off by exfoliation. As this process seems to be almost entirely completed, it is presumed that this sinus will shortly close. The foot and whole limb is somewhat swelled, and, by measurement, the circumference at the wound is twice that of the correspondent portion of the other limb. This difference will be in a great measure diminished after the cure is completed, and he shall have regained full health.

The injured limb is shortened nearly one inch and a half. The curvature of the limb inwards is only slight, but, to overcome this tendency as far as was practicable, an outward splint and roller were, during the progress of the case, used for a time, but are now laid aside. The application of bran is still used alone, with the exception of a roller gently applied over the whole limb, from the toes to the groin, intended to counteract the disposition to œdema, that has been particularly observed since the discontinuance of the pressure used during the application of the outward splint.*

BURNS.

Cases of Burns treated with Cotton, by DR. ANDERSON, *at the* GLASGOW ROYAL INFIRMARY.

ABOUT the year 1823, I admitted several cases of burns into the Glasgow Royal Infirmary, to which cotton had been rudely applied previous to admission. In these cases, the cotton was retained on the parts for trial, but without the expected effect; for in none of them had there been any care taken, either in preparing or in properly applying the remedy; on both of which circumstances I am now convinced that much of the success depends. I have since seen a great many cases of the same kind; and others have come to my knowledge, in which, from the improper application, or the too early removal of the cotton, it has failed entirely in being useful.

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* American Journal of the Medical Sciences.

Nothing, however, can be more satisfactory than the evidence in favor of this plan, when rightly adopted. The first case, indeed, which determined me to use it was one in which the comparative merits of the old and new treatment were very well seen.

I.—A healthy girl was admitted into the Royal Infirmary, on account of a vesicated burn, occupying both legs, the back of the thighs, and part of the nates. Previous to her admission, the right leg had been dressed with carded cotton wool, which having absorbed the discharge, had now formed a close covering to the whole sore. The left leg had been daily dressed with the Linimentum Aquæ Calcis, and discharged healthy pus. She had little uneasiness from the right leg, and the cotton was not removed until the third week, when a new and sound skin presented itself.

Poultices were first applied to the left leg, which, however, continued inflamed and acutely painful. It was afterwards treated by a great variety of applications, according to its particular state and appearance. At the end of the second month there were still several troublesome ulcers in the seat of the injury, which, although frequently much reduced in size, did not cicatrise until the middle of the third month, when she was at length dismissed. The state of both limbs in this case corresponded so nearly as to afford a pretty correct comparison; and the cotton was so obviously preferable to the usual applications, that I determined to try it more fully.

II.—The next case was much more severe. This was a female, aged twenty, whose clothes had caught fire while she was asleep in a state of intoxication. The face, neck, superior extremities, trunk anteriorly and posteriorly as far as the loins, outside of the hips, inside of the thighs, and about the labia pudendi, were much burnt and sphacelated. The mental faculties were not impaired; but the pulse was imperceptible at the wrist, and the action of the heart was found by the stethoscope to be quick and very feeble. She had rigors, a cold skin, and occasional vomiting.

Laudanum, ether, and brandy, were given, and the warm bath seemed in this case to be both agreeable and useful. Still she was in great misery; and it was not until the whole injured surface had been carefully enveloped in cotton that she stated herself to be much relieved. The pulse and heat were gradually restored; the vomiting ceased, and her countenance expressed a corresponding increase of comfort. In this state she continued for two days. There was little local pain, and the parts were not touched; but at the expiration of this time she died, as I fully expected, from the severity of the injury. No inspection of the body was obtained.

Here there was at least no discouragement to the repetition of the same treatment.

III.—Another case, in a girl of ten years of age, corresponded in most particulars with that just noticed. In this case the parts were all covered with a thin layer of what is called patent or Liverpool lint, and over this cotton wool was applied, so as to afford protection against pressure. This patient said that the dressings gave instant relief; and no one who saw her before and after their application could doubt this for a moment. In this, as in the former cases, however, the injury was far too great to allow of recovery. The lint was not removed from any part, and she continued easy, and even comfortable, until the fourth day, when delirium came on, and she died. The brain was somewhat softer than usual, and presented numerous bloody points when cut. There were several ounces of serum effused at its base, and the veins of the pia mater were turgid. No morbid appearance was seen in the thorax or abdomen.

These cases showed the primary effects of the remedy in soothing and allaying pain, and the inexpediency, as well as the inutility, of frequently removing the dressings.

IV.—The next case was that of a collier, from an explosion of fire-damp, by which the face, left arm and forearm, part of the right arm, and both ankles, were scorched and vesicated. The cotton was applied immediately on his admission. He had several times been burnt before, and he now expressed in strong language the relief he experienced; and said that he had never, on former occasions, even when the injury was less, felt nearly so easy as under the present treatment. In a fortnight the face was well, without any mark, and without removing the cotton until it came off of itself. About the tenth day I examined the state of the arms, which I now think was improper. This was not repeated, however, and at the end of the fourth week he was dismissed perfectly cured.

V.—A labourer, twenty-one years of age, was next admitted, five hours after the explosion of gas in a coal-pit, by which the whole of the face, right arm, forearm and hand, left forearm and hand, and middle third of both legs, were severely burnt. The parts were quite covered with vesications, except on the hands, where the thick cuticle was detached, and lay loosely upon the cutis, which was inflamed and moist. He complained of excessive pain in the injured parts. They were all carefully put up in cotton, and no point was left uncovered. On the following day, he said he had slept well, and was much relieved, being free of pain. Suppuration took place in a few days; but, although the discharge through the cotton was very considerable, the first dressings were not removed from the limbs until the thirteenth and fourteenth days, and not until the fifteenth day from the face, They had formed a complete case for the tender parts, coming from the hands exactly in the shape of a glove, and like a mask from the face, so as to form very good specimens of the operation of the remedy.

The aspect of the parts at the first dressing was worthy of particular attention, in reference to the difference they exhibited from burnt surfaces under any other mode of treatment. Many inches of new skin had already been formed along the whole circumference of the sores. The surface interior to this, which could scarcely be called a sore, and certainly not an ulcer, was, throughout its whole extent, on a level with the adjoining sound skin; and, although inflamed and discharging pus, it could not be said that there was any solution of continuity. At first sight, the parts appeared to be covered with numerous small points of granulation; but, from careful examination, I am inclined to think that these points are not properly granulations, but only the natural papillæ of the skin, denuded of cuticle, inflamed and enlarged, so as to present a granular appearance. In this opinion I am strengthened from observing the subsequent process of cure, which, except in cases of deep injury, always takes place without any appearance of cicatrization.

And here it is that the chief excellence of the present plan consists; for it is unnecessary to do more than allude again to the frequent, or rather the constant, occurrence of large, hard, and contracted cicatrizations, even in what are generally looked upon as favorable cases of cure. I am quite sure that, under the usual treatment, by frequent removal of the dressings, of whatever kind they may be, the parts in such a case as this must have become open, granulating sores, of difficult and tedious cure, which would have left scars destroying the motions of the fingers, disfiguring the face, and probably producing ectropion in one or both eyes. The only change observed in this man's face was somewhat curious: he had previously been marked with small-pox, but, after the removal of the cotton, this deformity was scarcely observable.

The cure of this burn may be said to have been accomplished at the end of the fourth week; but some part of the dressings did not separate so soon, and he was detained in the house for some time, partly on this account and partly as an example to the pupils, of the benefits of the practice adopted.

Some care is necessary both in preparing and in applying the cotton. For this purpose it should be finely carded, and disposed in narrow fleeces, so thin as to be translucent; by which means it can be closely applied in successive layers, and is thus made to fill up and protect the most irregular surfaces. The burnt parts, if vesicated, are to be washed with tepid water, and the fluid evacuated by small punctures. Or if more deeply scorched, they may be bathed with a spirituous or turpentine lotion. The cotton is then applied, layer after layer, until the whole surface is not only covered, but protected at every point, so that pressure and motion may give no uneasiness. On some parts it will adhere without a bandage, especially when there is much discharge, but in general a support of this kind is useful. Where the vesications have been broken and the skin is abraded, or where there is sphacelus, more or less suppuration always ensues, and in such cases the discharge may be so great as soon to soak through the cotton and become offensive, particularly in summer; so that it may be necessary to remove the soiled portions. This, however, should be done as sparingly as possible, taking care to avoid uncovering or disturbing the tender surface.

The utility of cotton in burns suggested the propriety of adopting the same remedy in erysipelatous, blistered, and all superficially ulcerated surfaces, from which we do not wish to keep up a discharge.

I have repeatedly tried it in such cases, and I have found it particularly useful in abrasions and excoriations from pressure, whether arising from tight bandaging or from lying too long in one position. Much time is thus saved in healing; and what is of no small moment, much pain and irritation from repeated removals of the dressings is avoided. He only who has suffered from such a cause can set a proper value on the benefits which are thus conferred.*

MISCELLANEOUS.

Rupture of the Gut in a Hernial Sac.—JOHN COX, a man between thirty and forty, was admitted into GUY'S HOSPITAL on the 16th of April, having a short time before received a kick from a horse upon a scrotal hernia, under which he had laboured for many years. His countenance was pale, the surface cold, and the pulse weak, with great prostration of strength and appearance of anxiety. He also complained of pain in the lower part of the belly, as well as in the hernial sac. Leeches were applied, and some calomel and opium administered, and he rallied a little; but the next day, the bowels refusing to act, notwithstanding the exhibition of gentle purgatives and clysters, vomiting came on, and he gradually sunk and died at six in the evening. On examination, a quantity of feculent matter was found in the abdomen, with part of the castor-oil which had been administered: these had escaped through an opening in the ileum large enough to admit the point of the little finger. Inflammation over the entire surface of the peritoneum had already taken place.

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* Glasgow Medical Journal.

Extensive Wound of the Abdomen.—W. Walker, a man about forty years of age, was lately brought into the MIDDLESEX HOSPITAL, who had the cicatrix of a very extensive wound he had received some years previously on the abdomen. He stated that he had been a sailor on board a whale ship, and that, five years ago, having gone on deck when it was very slippery, and he having but imperfectly recovered from an injury of the foot, fell in the act of making water, so that the lower part of the abdomen came in contact with a filching knife which lay on the deck. An incision, *twelve inches and a half in length*, was the result, extending across the belly; the penis was completely divided, and the intestines protruded at each side. He bled very freely, and was confined to bed for five months; at the end of which time he was able to move about a little, and has since been able to follow his former trade, that of a stocking weaver.

Strangulated Hernia, successfully treated with Tobacco Clyster.

John Iverton, a young groom, was lately admitted at ST. GEORGE'S HOSPITAL, under the care of Mr. ROSE, having been subject from his childhood to a rupture on the right side, which generally went up without much trouble. It had come down about a month before his admission, and some degree of tumor remained after its apparent reduction. On the day he was admitted he had been riding, and during this time the gut came down, giving him some pain, and speedily bringing on sickness. He was bled till he fainted, put into the warm bath, had ether and ice to the tumor, and the taxis diligently applied; but without avail, the tumor remained tense and painful, extending nearly from the bottom of the scrotum, along the inguinal canal, to the inner ring; the testicle appearing to be situated below and to the inside of the swelling, and there being some effusion into the tunica vaginalis testis, which rendered the parts rather obscure. In the evening, the other remedies having been fairly tried, a tobacco clyster was administered, and speedily followed by the reduction of the hernia. Still, however, a tumor remained, which proved to be hydrocele.

Fracture of the Skull, with Depression, in a Child, successfully treated.

C. Brown, a child four and a half years old, was brought into the MIDDLESEX HOSPITAL, in a state of insensibility, on the 13th of March, having been run down by a horse. No contusion could be perceived on the head, but a depression was felt on examining minutely behind the right ear. On cutting down at this part, a fracture was brought into view, with depression to the depth of about a quarter of an inch. Two pieces of broken bone were so impacted as to render their removal difficult: this, however, was at length accomplished, by which a considerable portion of the dura mater was exposed. The wound was lightly dressed, and a cold lotion applied to the head. When the operation was completed, the child opened her eyes and began to cry, asking for her mother. During the ensuing night, she had a great deal of vomiting, and was restless. The bowels were kept open, and she gradually improved, so that in two days she had regained her natural appearance and manner, and very speedily recovered.

Fracture into the Knee-Joint, successfully treated.

March 24th.—A. Aldred, a sailor, about forty years of age, fell from the top of a waggon, and broke his leg: he was brought to St. George's Hospital in two hours after, when it was found that the head of the tibia was broken off just above the insertion of the ligamentum patellæ, and the part separated was itself divided into two portions; the fibula was safe. There was a good deal of swelling, and blood appeared to be effused into the limb. This state continued to increase, and next day the leg was prodigiously swollen, with much pain, particularly about the knee.—He was twice bled, had leeches applied, and was purged; the limb was placed upon a double inclined plane, and a cold lotion constantly applied to it.

Under this treatment the symptoms gradually abated, and on the 1st of May the use of the fracture-box was discontinued, and the limb bandaged; in a week more the bandage was left off, there being only some thickening about the joint, with stiffness.

Poisoning with Oxalic Acid, successfully treated.

A girl, only fifteen years of age, was brought into St. Thomas's Hospital on the 7th of last month, about an hour and a half after having swallowed some oxalic acid (quantity not known) for the purpose of destroying herself. She had heat and burning pain along the throat and fauces, and vomiting of bloody mucus. The first method adopted was the application of Read's syringe, by means of which the stomach was thoroughly washed out with chalk and water. After this she was so much reduced that it was necessary to give her some ammonia, with a little laudanum (ten drops,) in camphor mixture, and to apply warmth to the surface. For several days she complained of soreness of the tongue and fauces, with occasional vomiting, and tenderness on pressure at the pit of the stomach. Twelve leeches were applied to the abdomen, and a solution of the chloride of soda used as a gargle.

Under this treatment, she entirely recovered in a few days.

CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus*.—PERSIUS.

Transactions of the Association of the Fellows and Licentiates of the King and Queen's College of Physicians in Ireland. Vol. V. —8vo. pp. 576. J. Cumming, Dublin; Longman and Co. London, 1828.

As usual, in reviewing works of this nature, we shall confine ourselves in this department to those papers which contain general remarks, and place such of the cases as appear of sufficient interest in the COLLECTANEA.

On the use of the Nitrate of Silver in certain Affections of the Eye.

By ISAAC RYALL, Esq.

Mr. RYALL remarks that there is no article in the materia medica so frequently useful in affections of the eye as the nitrate of silver; a circumstance, however, which has led to its very general adoption and too indiscriminate use. The object of the present paper is to draw a line of demarkation between those cases in which it is advantageous and those in which it is hurtful, and the author speaks, in succession, of those conditions in which its application is proper.

The first of these which he mentions is *ulcer of the cornea,* a termination of ophthalmia extremely common among those who apply for relief at the Eye Institution in Dublin. Frequently after protracted, and sometimes after mild inflammations of the cornea, an "infinite number of small superficial ulcers" make their appearance upon it. For this form of the disease, Mr. Ryall recommends a solution in the proportion of two grains of the caustic to one ounce of distilled water; but if the ulcers do not readily heal, the strength of the solution is to be increased; and, in either case, the remedy is best applied by injecting into the eye. When the ulcers are deeper, the caustic is still more imperatively required, and, besides the injection, the ulcer itself must be touched either with a camel's-hair pencil dipped into a concentrated solution, or else with a piece of the solid caustic brought to a fine point; dropping a little oil of sweet almonds into the eye after each application. This is to be repeated on each separation of the eschar, till the ulcer assumes a healthy aspect.

Mr. Ryall, generally speaking, disapproves of mercury, recommending light nutritious diet and mild tonics. The vinous tincture of opium, so much used, he thinks a very injudicious application.

Pustule most frequently appears at the junction of the sclerotica and cornea. If the accompanying inflammation be severe, the usual antiphlogistic means are to be adopted; while the ulcerative process will be restrained, if not removed, by a few touches of the strong solution of caustic. When the disease runs into *sloughing of the cornea,*

> "As an external remedy in this dangerous state of the eye, there is none so grateful, or withal so efficacious for throwing off the morbid parts, as a solution of the nitrate of silver in the proportion of eight grains to the ounce of distilled water, briskly injected against the slough three or four times a day. But, to obviate and arrest the progress of this serious termination of disease, we must rest our chief reliance on the extract of cinchona, so justly praised by the late Mr. Saunders. Opportunities are afforded to me but too frequently of giving this medicine a fair and full trial, in the cases of young infants born for the most part in the Lying-in Hospital; and I assert that, greatly as I had been prepossessed in its favor, it far exceeded my expectations, since both shape and function were preserved to an extent I dared not to hope for, in several instances where death of the exterior laminæ of the cornea, or of a segment of its entire thickness, had already taken place, and when the eye had presented the appearance of a disorganised mass. I have also lately used the sulphate of quinine in sloughing cornea with manifest advantage." (P. 7.)

When either ulceration or sloughing have made a cavity, through which the *protrusion of the iris* takes place, the nitrate of silver "is our chief, perhaps our only, resource." The early use of the belladonna, to prevent adhesions between the iris and adjacent parts, is particularly enjoined.

Nebulous cornea, which results from protracted inflammation, often proves extremely troublesome, and the opacity being sometimes so great as scarcely to permit the pupil to be seen, and occasionally the cornea even assumes the toughness and shining whiteness of cartilage. The following is the treatment recommended by our author:

> "The application of leeches to the inner surface of the lower palpebra, the exhibition of purgatives, and precaution against strong liquors and cold, are the first objects to be attended to. If granulations exist on the palpebræ, they are to be removed by the means hereafter to be mentioned under the head of "granular palpebræ." After the vessels shall have been well emptied by the daily application of two leeches to the conjunctiva of the lower eyelid, and a few purgatives have been administered, a circle, or as large a segment of one as will include the opaque portion of the cornea, is to be described with the pencil-pointed caustic on

the sclerotic, at about two lines distance from its junction with the cornea. After the eschar has sloughed off, ulceration is to be kept up for some time by the same means, care being taken to subdue any excessive inflammation which may be thus produced. The solution of the nitrate of silver, varying according to circumstances in the proportion of from two to six grains to the ounce, is to be frequently injected into the eye, and the ointment of the red oxyde of mercury applied every night to the tarsi, a portion of which may be allowed to be diffused over the surface of the eyeball. In some of the worst cases of nebulous cornea, the Liquor Subacetatis Plumbi has been dropped into the eye twice a day with great advantage. Absorption of the effused lymph, and contraction of the vessels, were speedily produced. It must be acknowledged, however, that these are not, in the majority of cases, its gratifying results. It is the practice with some to cut off, with a pair of curved scissors, a portion of the conjunctiva concentric with, and about two lines distant from, the cornea, and to continue the excision as far around the circumference of that tunic as its extent of opacity may require. The turgid vessels are by this plan emptied; but it has been found, when adopted in an irritable state of the organs, to create excessive inflammation and a new production of vessels. For the relief of that truly distressing attendant of this and other forms of protracted ophthalmy, profuse secretion from the lachrymal and tarsal glands, the dilute sulphuric acid, in the dose of from twenty to thirty drops in a glass of water twice or thrice a day, will prove of singular benefit; and it is probable that, if combined with the sulphate of quinine, its virtue would be still further enhanced." (P. 10.)

Mr. Ryall thinks that the use of the nitrate of silver has been much abused in the early stage of *albugo*. The re-absorption of the lymph producing it he thinks is best promoted by topical bleeding, and alterative doses of calomel, antimony, and opium. When, however, these fail, after a fair trial, then recourse must be had to a solution of "from four to eight grains of the nitrate of silver to one ounce of distilled water," to be used twice or three times a day; and a little of the weak ointment of red oxyde of mercury every night.

A few remarks are made on some other affections in which the caustic is of use, particularly Granular Palpebræ and Ectropion; but there is nothing particular in the mode recommended.

Observations on the use of Ipecacuan in Menorrhagia.
By J. OSBORNE, M.D.

Dr. OSBORNE thus states the results of his experience:

"I began the use of ipecacuan by ordering a scruple to be taken as an emetic at night, and I generally directed an acidulous saline purgative to be administered the following morning. The effect produced exceeded my most sanguine expectations. The discharge either ceased within twenty-four hours, or was so much diminished that no more remedies were necessary to insure its entire removal. In some few cases it recurred within a short time, but, when this did happen, it was only necessary to repeat the emetic once or twice in order to produce a permanent effect. I met with a few individuals in whom the discharge continued with little alteration after the first emetic, but with these I had only to repeat the remedy on the following night; and in one case alone three emetics were taken before the desired effect was produced." (P. 20.)

Observations on the Peripneumonia of Children.

By THOMAS CUMING, M.D.

Dr. CUMING is assistant physician to the "Institution for the Diseases of Children," a situation which has afforded him extensive opportunities of witnessing the disease of which he treats.

He states that peripneumonia is common in children of all ages, from a few days up to nine years, but that those from nine months to two years old are most obnoxious to it; a circumstance which he attributes to dentition, as predisposing to other disease.

"In some instances it commences suddenly, and without any assignable cause. It has sometimes happened that the child has gone to bed in perfect health, and risen next morning with all the symptoms of the disease distinctly marked. Such cases, however, are rare. In general a trifling cough, with other slight symptoms of catarrh, precedes, by a day or two, the complete formation of the disease. When fully formed, the symptoms by which the disease is characterised are a hurried, laborious, and wheezing respiration; a frequent, short, and dry cough, and a greater or less degree of fever. With the fever are combined an extreme degree of restlessness and impatience, moaning, starting out of sleep, and aversion to be moved. The countenance, though occasionally flushed, is for the most part extremely pallid, sometimes sallow; and, as the disease advances, it frequently assumes a mottled livid hue, and becomes in some cases swollen and œdematous. When the progress of the malady cannot be stopped, the breathing becomes more hurried and laboured, and the wheezing amounts in many cases to rattling. A state of drowsiness and prostration succeeds to the state of restlessness and pervigilium, which had existed in the beginning; the cough is suspended; the pulse becomes imperceptible; the extremities cold; and, in the course of eight or ten days from the commencement of the attack, death generally takes place by suffocation.

"With regard to the respiration, the average natural frequency of which, in an infant under twelve months, is about thirty in the minute, I have frequently observed it to be sixty, seventy-eight, eighty, ninety, and 102 in the minute; and in one case, that of a child six months old, I counted no fewer than 118 inspirations in the minute.

"When the respiration comes down from the frequency above mentioned to fifty-four or forty-eight in the minute, it generally indicates that the disease will terminate in recovery.

"In some instances there is an intermission of the breathing,—that is, for three or four inspirations and expirations it will be of natural frequency, then for about the same number it will be double or triple this frequency, and then again it will become as slow as at first.

"Although in almost every instance, as the disease advances towards its fatal termination, the breathing becomes more and more hurried, I have observed in one or two cases, in which in the beginning the respiration had been excessively hurried, that it fell to near the natural frequency a short time before death.

"In addition to its frequency, I have mentioned that the breathing is laborious. This state of the respiration is abundantly evident from the heaving of the chest, and the alternate dilatation and contraction of the alæ nasi; symptoms which are never absent when the breathing is much oppressed. In some instances, towards the close of the disease, the head is violently retracted, while the lower jaw is depressed at each inspiration, and the patient lies for a considerable time with his mouth open and gasping for breath before death puts a period to his sufferings.

"The respiration, though generally wheezing, is not always so. In some cases there is no wheezing at any period of the disease; and in others, though the breathing is loud and audible, the sound seems to proceed rather from some impediment offered to the air in its passage through the nostrils, than from mucous accumulation in the bronchia. It is difficult, by description, to convey an accurate idea of the sound to which I allude. I would call it a *dry* sound, in contradistinction to the other, which may be termed *humid*. It seems to be owing to a straitening of the air-passages, occasioned by the inflammatory turgescence of the membrane by which they are lined. When secretion takes place, this turgescence is in a great degree removed, and then the sound, from being dry, becomes moist and wheezing.

"In some instances the sound emitted in respiration seems to be a compound of the two sounds already mentioned, and to proceed partly from nasal and partly from bronchial obstruction. In the great majority of instances, however, the sound is distinctly wheezing, varying in degree from that of simple crepitus up to the loud and mucous rattle.*

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* "The sound here described, though in most cases abundantly evident to the naked ear, is heard with much more distinctness when we have recourse to the employment of the stethoscope. By means of this instrument we are

"The cough, which is generally short and dry, is for the most part frequent at the commencement, becomes less so as the disease advances, and towards the close it is occasionally suspended altogether. A return of the cough, after it has been for some time suspended, is always to be considered as a favorable symptom." (P. 30.)

The stomach, at the commencement, is occasionally irritable, but becomes torpid as the complaint advances, so that the strongest emetics will then fail to act. This insensibility is not confined to the stomach, but is extended to the skin, which it is frequently impossible to vesicate by a blister. When the attack terminates fatally, the event generally occurs about the eighth or tenth day. When recovery takes place, the disease seldom lasts above a week. On post-mortem examination,

"The morbid appearance most frequently met with is an increase in the solidity of the lung, varying in degree from that of the slightest sanguineous congestion up to complete hepatization. This increase of solidity or induration is not equally great in every part of the lung. The inferior and posterior portion of the lung is in general the part principally affected; and it frequently happens that, while the upper portion is in a healthy state, or merely a little more congested than natural, the inferior portion is completely hepatised. It would appear as if the morbid process, commencing in the lower part of the lung, had completed its course there before the superior portion had advanced beyond the stage of sanguineous congestion. By hepatization, I mean that state of the lung which is characterised by a purplish red colour externally, a bright red colour and granular appearance when the lung is incised, and a total absence of crepitous, the lung feeling firm and solid, and sinking in water. This state corresponds with the second degree of inflammation of the lung, as described by Laennec. The first degree of inflammation, according to the same author, is the state of sanguineous congestion above mentioned. Laennec's third degree of inflammation, or that which is characterised by a purulent infiltration of the lung, I have not had an opportunity of observing. When the first degree of inflammation, or that of sanguineous congestion, prevails, it is generally combined with more or less of serous effusion into the interlobular tissue of the lung; but, where the lung is hepatised,

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also enabled to ascertain whether the inflammation is confined to the mucous membrane; for, when the substance of the lung is affected, this is sufficiently indicated by the indistinctness or absence of the respiratory murmur in that portion which is the seat of disease. If, in the exposition which I have given of the symptoms of this disease, I have not mentioned the stethoscope, my omitting to do so has not arisen from any want of confidence in the indications afforded by this instrument, the value of which I can duly appreciate; but solely because I have not yet attained to that precision in its use which would justify me in speaking of it as a means of diagnosis."

its section appears dry and granular, and very little serous or any other kind of effusion escapes.

"Although an increase in the solidity of the lung is the morbid appearance most frequently, indeed constantly observed, yet along with this, in almost every case, is combined more or less of inflammation of the mucous membrane of the bronchia. In some cases the inflammation extends to the trachea, the mucous membrane of which is more vascular than natural, and smeared with a tenacious mucus. In a few instances which fell under my observation, the trachea and bronchia were both highly inflamed, (two were cases of genuine croup,) and contained a considerable quantity of purulent mucus. Where the bronchia and air-cells are filled with mucus, the lungs collapse imperfectly, and nearly fill the corresponding cavities of the chest. In two cases, in which no trace of inflammation could be detected in the trachea or bronchia, the air-cells were filled with a purulent mucus, which exuded in abundance on making a section of the lung. In only one case, and that was a case of pertussis combined with inflammation of the substance of the lungs, which terminated fatally by convulsions, was the mucous membrane of the trachea, bronchia, and air-cells perfectly free from apparent disease.

"The more intense the inflammation of the mucous membrane, and the more considerable the effusion into the bronchia, the less in general is the induration of the lung, and vice versâ. In the cases of tubercular disease above mentioned, the tubercles coexisted with induration of the substance, and inflammation of the mucous membrane of the lungs." (P. 40.)

In this, as in other diseases, the danger is in proportion to the intensity of the symptoms; but those which may be pointed out as denoting urgent danger, are turgidity of the countenance, with coma and a rapid intermitting pulse;—indeed, under these circumstances, the event is almost invariably fatal.

In the treatment, three indications are laid down, all of which have reference to the effusion which takes place into the respiratory organs. 1. To arrest the inflammation, and thus prevent effusion; 2, to moderate this, if its entire prevention be not possible; 3, to promote the absorption and expectoration of whatever has been effused.

If we are fortunately called in at the very commencement of the disease, the first of these indications may sometimes be fulfilled; and blood-letting is the great remedy to be employed. Dr. Cuming says, it is a mistake to suppose that children do not bear bleeding well, or that their ailments do not require it. The earlier the bleeding is employed, of course the better chance there is of its not being required again, and the following is our author's estimate of the proper quantities:

"In a child about two years of age, from three to four ounces may be abstracted; and when the age is above four, about five, six, or eight ounces may be drawn, according to circumstances. In an infant under six months, though general blood-letting may often be required, the application of three or four leeches to the back of the hand or foot will for the most part answer the purpose where a vein, which is frequently the case, cannot be found. It is better to apply the leeches to the hand or foot than to the thorax, for, when they are applied in the latter situation, it is difficult to stop the bleeding after they have fallen off; and instances have occurred in which a fatal hemorrhage has been the consequence of a continual oozing from four or five leech-bites. When they are applied to the hands or feet, the bleeding can be easily stopped by placing compresses of lint over the bites, and securing them, as after the operation of V.S., by a bandage. As far as my observation goes, leeches applied to the extremities are nearly as efficacious in removing local inflammation in infants, as when applied in the vicinity of the part affected. They seem to produce the effect of a general blood-letting; as the face and lips become pale, the pulse faulters, and syncope occasionally takes place, followed by vomiting. These effects are apt to be produced when general V.S. is carried to a considerable extent, and sometimes a state of nervous agitation and general commotion is induced, which, if not speedily removed, may terminate in death. The best remedies in a case of this kind are the horizontal position, cool air, and a drop or two of the tincture of opium." (P. 49.)

Dr. Cuming remarks, that he has seldom seen the blood cupped or buffy in this complaint. As auxiliaries to blood-letting, emetics and purgatives are recommended. Of the emetics, our author gives the preference to the antimonials, and he thinks that the apprehensions of Dr. Clarke on this subject are groundless. Of the various purgatives, calomel and jalap are those which he most approves. "To a child between six and twenty months, we may give a grain of calomel, with four or five of jalap, and one of ginger, for a dose." After the preceding means have been premised, a blister is recommended to be applied between the shoulders or to the chest, and our author seems to place considerable confidence on this class of remedies; for he states that, after both the chest and back have been blistered, he has seen benefit from the "application of a blister to either side." When the debility is pressing, and suffocation is threatened, stimulants are recommended: of these he prefers the carbonate of ammonia, and in this our own experience fully corresponds with his.

Observations on Cow-Pox, and on the Necessity of adopting Legislative Measures for enforcing Vaccination, in a Letter to Mr. THOMAS BROWN, *Surgeon, Musselburgh, containing Remarks on his " Letter to the Right Hon. the Earl of Liverpool, concerning the present State of Vaccination."* By HENRY EDMONSTON, A.M. Surgeon, Newcastle upon Tyne.—8vo. pp. 156. Longman and Co. London, 1828.

THE author of this little volume very candidly informs us in his preface, that we need not look "for any thing in the shape of original discovery" upon the subject upon which he treats. " Dr. JENNER begun, and Dr. BARON has ended, by leaving nobody any thing to do." If nothing new can be expected upon the subject of vaccination, there are still many points concerning it which are open to discussion, which require to be definitively determined, and the consideration of which cannot be deemed either tedious or uninteresting.

We shall pass over as much as possible the critical tartness with which Mr. EDMONSTON comments upon the doctrines of the gentleman he addresses, and confine ourselves to his observations upon the material points of the subject. We beg, however, not to be understood as making this observation in the tone of reproof for any undue severity on the part of Mr. E. He evidently feels warmly, and writes with corresponding energy. We think also he complains with justice not only of the matter contained in the letter which calls forth his strictures, but of the mode in which that letter was addressed to Lord Liverpool. Mr. BROWN, it appears, has long been the supporter of the proposition " that the vaccine influence over the human body, as enabling it to resist small-pox contagion, is feeble, partial, and temporary." These are, indeed, formidable objections to the practice, and such as the general voice (to which we may add our own experience, which has not been trifling,) decidedly opposes.

Although Mr. Edmonston's Letter is addressed to a particular individual, its application is meant to be general to those who adopt the opinions of Mr. Brown.

Upon every point connected with vaccination, wherever it can be done with propriety, Mr. E. prefers going back to Dr. Jenner, as he believes that scarcely one fact or principle of any importance has been added to the plain, unpretending, but luminous account, originally published by him. " In regard to vaccination, the many volumes written on it since his time will be found, on a careful examination, to be little else than mere amplifications or confirmations (always excepting the objurgations of his opponents,) of what was originally said by him."

Mr. Brown observes, that one ground of the doubts originally entertained respecting the efficacy of the vaccine disease was "its possessing no character resembling the disease which it was meant to combat." To this Mr. Edmonston rejoins, very justly, that, "without adverting to several distinguishing marks of similitude between the two diseases, actually traced by Dr. Jenner, it will suffice to assert, what admits of no dispute, that the non-resemblance, even did it exist, militates nothing against its power of combating the antagonist disease." (P. 15.)

The second ground of doubt is its exerting *no* sensible or distinct influence over the human body. The answer to this objection is obvious. In the first place, the vaccine disease *does*, in the majority of cases, exert a sensible influence upon the body; and, secondly, the degree of general derangement produced would form no criterion of its power of preventing small-pox.

We pass over several paragraphs of Mr. Brown's letter, which our author formally, and perhaps unnecessarily, canvasses, as they contain assertions "that might be met by a flat unceremonious negative." Mr. Brown is also more bold than just in his assertion that

> "It is now generally granted, that the vaccinated cases are not only more readily influenced by the small-pox contagion, but also in severity, according to the extent of the period from vaccination; and these severe, dangerous, and even fatal cases, have, with very few exceptions, generally occurred at not less than ten years from the period of undergoing the vaccine disease; and there seems an inclination among those only who have been the professed advocates of vaccination to limit the period of increased facility and severity to this distance from vaccination, and that, after that period, there seems no additional tendency to be more strongly influenced by the small-pox contagion." (P. 26.)

Such an opinion may have been entertained by a few hasty and partial opponents of vaccination, but it has never been countenanced by the profession in general. Lord Liverpool is also instructed by Mr. Brown, that

> "The reason that the cases of failure do not assume an uniform appearance will be found satisfactorily explained, either from the difference in the severity and mode of application of the small-pox contagion, or from the different extent of influence imparted to the constitution, by the variety in the vaccine phenomena; for, according to the severity and extent of the vaccine phenomena, so is the extent of impression and security imparted to the constitution." (P. 27.)

It is charitable to dismiss this erroneous statement by lamenting the want of knowledge it betrays upon the subject of vaccination. There are few practitioners, we apprehend, who need be guarded against the dangerous practice a concurrence in it would lead to. Nothing could be more injurious to the interests of vaccination than the belief of the necessity of causing a *severe* disease. One perfect and *undisturbed* vesicle is adequate to every purpose of security.

We really cannot follow Mr. E. seriatim through his refutation of Mr. Brown's "ten insurmountable facts." We have glanced at a few of them, and—*ex pede Herculem.*

Having clearly shown that the "facts" are fables,—that they have been built up by very narrow, and not always very liberal views, upon this most important subject,—the author proceeds to the investigation of other opinions and statements scattered through Mr. Brown's letter. The first duty imperatively imposed upon Mr. B. is, that he should specify the sources of the evidence which would substantiate the contents of his letter to Lord Liverpool. He asserts that "the most satisfactory evidence" might be adduced. It is remarkable, however, that it is not brought forward.

Mr. Edmondston makes many judicious observations upon the subject of *Revaccination.* He maintains, and very properly too, that this is a question on which it is absolutely necessary that the public mind should be at once and for ever disabused, whatever be the sentiments entertained of vaccination.

> "What purpose can its supporters intend that it should serve? Would they once declare this, the subject might be more effectually grappled with; but I have never yet been able to find out the precise object at which they aim. It will be granted, I imagine, that vaccination must have either a permanent or temporary preventive power. If permanent, the necessity of revaccinating is of course done away with; if temporary, it must be for either a limited or unlimited period. If limited, even with the greatest exactness, every individual must have himself periodically and punctually vaccinated to the end of his days; a result which no system of medical economics could ever render attainable, or even endurable. If indefinite and unfixable, there is an end of the whole question. Dr. Jenner stated that, "although the cow-pox shields the constitution from the small-pox, and the small-pox proves a protection against its own future poison, yet it appears that the human body is again and again susceptible of the infectious matter of the cow-pox.' This principle, however, I believe he afterwards modified, so far as to consider the phenomena which occur after the first presumed constitutional impression as possessing only a local character." (P. 63.)

It has been a favorite idea with a part of the public, and a few members of the profession also, that it would be well to go back to the cow for occasional supplies of fresh matter in all its original purity. It has been suggested that the virus *may* have undergone a change, from passing through so many constitutions, "it may have degenerated, or become enfeebled, and so forth." Again, the *proofs* of these suppositions are required; for, "under fair circumstances, not the most trivial deviation can be detected between the last vesicle produced and the first case inoculated from the cow by the discoverer himself."

Upon one point we are inclined to differ from Mr. Edmondston. We should certainly wish that, in all cases, one vesicle at least should be allowed to pass through its usual course, without matter being taken from it. We do not think either that the cases are numerous which are vaccinated with only one puncture, and we are pretty confident that the practice of taking matter from a single vesicle is rarely adopted. We presume that the National Vaccine Establishment must have had some grounds for forbidding this practice; and as their opinions must have been formed from more extensive experience than any individual can possess, we should be inclined to conform to their recommendation.

The following passage deserves attention:

"As to the cicatrix, or any other of the phenomena singly, affording a criterion of perfect or imperfect vaccination, much need not be said. It is certain, and must therefore be admitted once for all, that small-pox has succeeded to cow-pox, where the cicatrix has exhibited all the alleged characteristics, while persons have escaped in whom these have been by no means so distinct,—nay, when they have been almost wanting. But what does this amount to? Really nothing. It is equally certain that small-pox has succeeded to variolation where the surface of the body has been pitted all over, while, in cases where not a mark can be traced, it has made no impression; yet we find many respectable authorities reasoning upon the appearance of the cicatrix as on a thing unalterably fixed. Of these I may here cite Dr. George Gregory, who, when speaking of cicatrices, says, 'the proofs of vaccination were distinct and undeniable." If he mean proofs of the act of vaccinating having been performed, he may be right; but I doubt whether he can say that, of perfect constitutional vaccination, he possesses one or more distinct, undeniable proofs? Even of constitutional variolation, I maintain there is no distinct, undeniable proof. What then is the cicatrix worth in either case? Why, it amounts, under any circumstances, to no more than a very strong presumption; and this view of the case is strengthened when we remember that the local phenomena may sometimes be manifested as perfectly when the constitution is not fully influenced as when it is. For any one, then, after examining the cicatrices, to declare that an individual has undergone perfect or imperfect vaccination, is, in my humble judgment, to declare more than there is sufficient warranty for; while the interests of vaccination must suffer in proportion to the degree of confidence assumed." (P. 73.)

The test recommended by Mr. Bryce is considered by the author to be impracticable in its general application, although he admits the ingenuity of the suggestion.

Mr. E. is certainly correct in asserting that cases of small-pox have *not* happened most frequently in those who have been longest vaccinated; neither has the susceptibility to small-pox contagion, nor the tendency to a fatal disease, increasing with the distance from the period of vaccination, been generally observed.

The custom of vaccinating infants within the first month after birth is said to deserve the severest reprobation. "At best, it is justifiable only under the most emergent circumstances, or when small-pox is at the door." A little speculation is hazarded as to the defective organization of the infant at so tender an age. But we would ask, are there any facts tending to show that small-pox has more frequently succeeded to vaccination in those cases where the child has been vaccinated during the first month, than in those where a later period has been chosen?

Mr. E. can perceive no satisfactory grounds (neither can we) for the opinion of Dr. G. Gregory, "that the younger the lymph, the greater the degree of its intensity." The eighth day is usually considered the most proper period for taking lymph, and Mr. E. observes, "that the whole phenomena and pathology of the disease distinctly point to that day, as to the period when the virus is present in its highest state of propagative energy."

Our readers are doubtless aware that Dr. FERGUSON has lately suggested the idea of producing by art the disease termed varioloid, or modified small-pox, by inoculation with both poisons: that is, with cow-pox and small-pox. The object proposed by this plan is to combine the mildness of cow-pox with what is supposed to be the greater security of small-pox. In reference to this practice, Mr. Edmondston observes,

"This theory of Dr. Ferguson either goes upon the principle of keeping alive pure cow-pox and pure small-pox, or it means nothing. Now, it is plain that, supposing the scheme to be carried into effect, the object aimed at cannot be accomplished. For instance, if I inoculate a patient A, I must take the matter from two patients, B and C, the one under genuine cow-pox, the other under genuine small-pox. The effect of this twofold inoculation is not cow-pox, nor is it regular small-pox; but it is, or ought to be, modified small-pox. Here, then, my progress is stopped; for, if I wish to inoculate a second patient D, I dare not do it from A, with his varioloid or modified disease, because that is expressly declared by Dr. F. to be 'dangerous.' What, then, is to become of D, if there be no double supply of matter at hand. I must either have in reserve, or must procure a fresh supply somewhere else. But then, according to the theory, all other practitioners must be similarly situated, and consequently in no better condition to assist me than I am to assist them. Besides, such a thing is necessarily debarred by the doctrine, which enjoins mildness and security, by inducing a varioloid disease. To obtain this, two patients would, in every instance, be required for the inoculation of one by the double method, and thus, by a sort of suicidal operation, the process must speedily destroy itself. We must either go on preserving two stocks of virus, which is impossible, or if possible, is inadmissible by the theory, or the two diseases must be exhausted in the ratio of two to one, and in the last resort we shall have nothing left but the modified or varioloid disease, from which we are told by Dr. F. that it is dangerous to propagate the disease further. Here, then, we should be brought to a stand; for, if we proceed at all, we must of necessity inoculate all the patients that hereafter may be with the virus of this modified or varioloid disease, which, as it is not a hybridous compound, could not be made to preserve its new character, but would be commutable into small-pox in the very first unprotected case, and the whole business would have to be commenced *de novo.*" (P. 113.)

If the refutation of Mr. Brown's opinions and statements had been the only object effected by the letter of Mr. Edmondston, we certainly should not have bestowed upon it so much of our attention. His doctrines are so obviously erroneous, his assertions upon the subject of vaccination so directly opposed to the general experience of the profession, that no danger need be apprehended from them. For several years Mr. Brown maintained opinions the very reverse of those he now upholds: he was originally a staunch friend to vaccination. Perhaps he may once more change; and, if he does *not,* the cause of vaccination will never suffer from the want of so fickle a supporter. If he again ventures to break a lance upon the same subject, he may be safely entrusted to Mr. Edmondston, who, in the work we have just noticed, "hits him hard and oft." If he does venture to renew the combat, we shall be astonished at his pertinacity in a bad cause, and lament his want of judgment.

There are many points connected with the subject of vaccination upon which the public, and even many of the profession, entertain the most erroneous views. Upon most of these sources of error, and even mal-practice, the present letter will be found to convey very useful instruction. Mr. Edmondston is a very eloquent and pleasing writer, and, although he sometimes deals very severely with Mr. Brown, we can freely forgive him for the merits of his cause, and for the provocation he has received.

An Essay on the Diseases of the Jaws, and their Treatment; with Observations on the Amputation of a part or the whole of the Inferior Maxilla: tending to prove that such Operations is seldom, if ever, necessary. With two Plates. By LEONARD KOECKER, Surgeon Dentist, Doctor in Medicine and Surgery; Member of the Medical and Linnean Societies, and of the Academy of Natural Science of Philadelphia; and Author of the "Principles of Dental Surgery," &c. &c. &c.—8vo. pp. 95. T. and G. Underwood, London, 1828.

THE publication of this little work tends to confirm the favorable impression made upon our minds by Mr. KOECKER's previous labours, and places him, in our opinion, in a very prominent situation as a scientific practitioner in the department which he has especially chosen.

In a modest preface, the author, after stating the difficulties with which a foreigner has to contend as a writer, especially when his opinions may be supposed to aim at novelty or originality, continues thus:

"In publishing this small Essay, I may be accused of a presumptuous attempt to treat on a subject which does not belong to my particular province: this, I trust, however, will be deemed erroneous, when it is considered that, although in their later and more complicated stages, the maladies of the jaws require the united aid of general surgery and medicine, they strictly, in their earlier forms, belong to the practice of dentistry, and never would require the assistance of the former, if the latter were judiciously afforded at a proper period.

"There is, moreover, a considerable difficulty in deciding at what period the exclusive treatment of the teeth becomes insufficient, and when the surgical and medical agencies are indispensably required; an inconvenience which can only be removed by affording all branches of the healing art the means of acquiring the most comprehensive views of the history, nature, and causes of the diseases in question." (P. 6.)

Mr. Koecker's Essay commences with some pages of preliminary remarks: these are principally critical, and have for their object to point out the erroneous views formerly entertained, and indeed still inculcated in modern works, upon the causes of many of the maladies of the maxillary bones. We shall not, however, observe the author's arrangement, but commence our extracts at page 28, where we find him making physiological and pathological remarks on the jaws. The diseases of the maxilla, says our author, rarely, if ever, have their origin in the cavity or antrum; but, in every instance where the mucous lining is affected, this will be found to be the consequence of disease of some part of the osseous structure surrounding it: the name, therefore, of disease of the antrum is an incorrect one, and has led to erroneous theory and practice. Both jaws are equally subject to these diseases, but with this difference, that the progress of disease in the upper jaw is facilitated by its greater vascularity and more spongy structure, which at the same time renders a natural palliation or cure of the complaint more common than in the more dense, osseous structure of the inferior maxilla, and also from the situation for the discharge of matter being more inconvenient. From the same circumstances, Mr. K. thinks that cancerous ulcerations more frequently occur in the upper jaw, without much previous tumefaction; whilst in the lower one sarcomatous and osteo-sarcomatous tumors more usually form, terminating fatally by the supervention of carcinoma. These tumors are always to be considered as consequences of other primary affections, and probably the earlier or later occurrence of the tumefaction depends much upon the state of the constitution itself. In the delicate, the progress is slower than in the robust; and this, though protracting the case, retards the period of tumefaction, as, when the disease has arrived at an acute state, it is constantly relieving itself by discharge, and then returns to a chronic form. In strong constitutions, the reverse of this is the case. The former variety of disease is most common in America, the latter in England and in the continent of Europe. These, when properly treated, admit generally of a more successful termination; but if, on the contrary, they be neglected or ill managed, afford the most dangerous varieties of the disease. The following passage we give in the author's own words:

"If art lends its aid to remove the local causes of the disease, nature will soon effect a perfect cure without further assistance. But the constitution being more active in its curative efforts, although incapable of removing the local causes without surgical assistance, the morbid action is liable to be increased by such powerful exertions of nature. If, moreover, these natural efforts are improperly interfered with by the treatment usually applied in cancerous affections, such as the exhibition of henbane, hemlock, mercury, &c. or by operations usually adopted in general surgery, the disease is seldom even palliated, and frequently aggravated by such unnecessary and painful operations, or stimulant remedies, all of which, when applied without a previous removal of the local exciting causes, must naturally augment the disease in the same manner as, though in a greater degree than, the unsuccessful efforts of nature. Hence it is in this state that the disease is more frequently considered incurable, while in fact it is more manageable than in any other: the difference is, that in this the powerful efforts of nature require more judicious attention on the part of the surgeon-dentist than in the other, in which the more passive state of the parts, and greater chemical activity of the matter, give a more distinct indication of the proper curative means.

"In constitutions, however, which are not only suffering from debility, but which are at the same time under the influence of actual disease, or of a general vitiated state of the system, such as is induced or excited by scrofula, scorbutus, syphilis, the abuse of mercury, or powerful narcotic medicines, &c., the diseases of the jaws most frequently proceed rapidly to their greatest extent and fatal termination. They are, moreover, produced often by the slightest causes: sometimes one dead tooth or stump is sufficient to give rise to great inflammation and mortification in the bony structure of the jaw, as well as in the membrane lining the cavity, and to hasten the primary disease through all its different grades; while exposure to great cold or heat, an accidental blow or fall, or any other irritation of a similar kind, acting upon the structures contiguous to parts already symptomatically affected, is quite adequate to excite, at every period of the malady, any of the secondary diseases, such as polypi, or œdematous, sarcomatous, and osteo-sarcomatous tumors and excrescences. Indeed, these secondary tumors may sometimes be observed at a period when the primary affection is so little advanced as entirely to escape surgical observation; and they may proceed to their greatest extent in a period of one or two years, before the idiopathic disease of the bony maxillary structure has had time to proceed to an advanced stage." (P. 33.)

This, which is the most unmanageable form of the disease, requires a combined medical, surgical, and dental management to obtain a favorable result. Thus any treatment which does not involve the removal of the local causes, both primary and secondary, will aggravate, and hurry the disease to its malignant state. The removal of a polypus, or a spongy or bony tumor, will be useless, unless the morbid condition of the jaw be also removed or cured; whilst this must be combined with a due attention to constitutional remedies.

The symptoms of the diseases of the jaw may be soon dismissed: they are similar to those occasioned by dead roots of teeth, or by affections of the alveoli and periosteum, from which they merely differ in degree of violence.

Of the causes of this disease our author treats more at length: they are chiefly those produced by local irritation, aggravated by constitutional derangement, and errors in diet, and even narcotic medicines or mercury, administered previously to the removal of the local disease, will tend to aggravate it; and so indeed will the free exhibition of mercury, from whatever cause. Our author enumerates among the causes of these diseases all operations performed with the intention of destroying the nerve or sensibility of the teeth; and then speaks of the method lately introduced of cutting off the crown of a tooth, in the following words:

"But the operation of breaking or cutting off the crown of painful teeth, which the inventor calls excision, is nothing less than an amputation by violent means, and cannot be adopted from any other cause than a culpable timidity on the part of the patient or the dentist, who are thus led to substitute it for the necessary extraction of the teeth, without even preserving the only useful and essential part, viz. its crown. It unquestionably effects, although not either without pain or so instantaneously as it is asserted, a destruction of the vitality of the remaining roots or stumps, which then become extraneous bodies; the permanent irritation of which, however, must tend to excite disease and induce mortification, not only in adjoining parts, but also in the remaining teeth and gums, not to mention the very great and dangerous irritation produced at the same time upon the whole nervous system.

"Should this be doubted, I beg to refer every medical and surgical reader to a careful examination of the parts, which will evidence the fact; for it will be found that, in a hundred jaws containing roots or stumps, without one single exception, the parts contiguous to the roots exhibit some marks of disease or mortification: unless, indeed, the teeth have been broken after the death of the subjects from which the bones are taken." (P. 42.)

We are next presented with some observations upon Inflammation, Suppuration, and Fistulous Perforations and Abscesses of the Jaw; and these are followed by the detail of an interesting but fatal case of malignant and cancerous affection of the jaw; for the relation of which, however, we have not room: but this we regret the less, because one or two of these cases have already been published.

We must now conclude this article by saying a few words relative to the mode of treating these various affections; but here we cannot do justice to our author, because the relation of the cases and the plan pursued in treating them are so mixed up together that it is impossible to separate them: we shall therefore conclude by inserting, in our author's own words, the general principles of treatment of inflammation and suppuration of the jaws:

"The first and most important indication of treatment in this affection is to remove from the maxillæ, and every part of the whole mouth, whatever irritation may have produced, or which tends to keep up the inflammatory action. This may generally be affected by the extraction—1st, of every dead root and tooth; 2d, of every tooth suffering from complicated caries, or every painful tooth; 3dly, of every large grinder which is deprived of its antagonist; and, 4thly, of every other tooth which is loose, irregular, or situated in any part primarily affected, or in any way capable of acting as a cause of irritation and excitement upon any part of the mouth, or which might be in the least expected to interfere with the exfoliation of the dead parts, or with the complete removal of them.

"All the teeth and roots which constitute the causes of the disease should be removed, if possible, at the same time; for a removal at different intervals will greatly diminish and protract the salutary result of the treatment. This, however, may frequently be deemed impossible, and the dentist must content himself with their removal at different periods. Any treatment, however, without the removal of them altogether, at least in a short space of time, will only be an injurious palliation, and occasion a relapse of the disease, sometimes more violent than the first attack; for the remaining affected teeth will keep up the morbid action, and either lessen or totally prevent the healthy inflammation of the whole mouth, but especially in the parts most extensively affected; whereas a perfect removal of these causes, followed by the greatest cleanliness of the mouth, will frequently effect a cure for the disease, even without any further operation.

"The second indication is to procure the most favorable discharge of the matter, and promote the healthy action of the parts affected by the adaptation of such means as are consistent with correct general surgical principles." (P. 61.)

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

PRACTICAL MEDICINE.

Iodine in Gouty Diseases.—M. le Docteur **Gendrin** lately addressed a letter to the Royal Institute on this subject. He thus expresses himself:

Among obstinate maladies, gout is, beyond contradiction, one of the most severe and painful. The great variety of medicines proposed for its cure sufficiently shows this. So many attempts, as yet futile, ought to inspire the greatest caution in any one who does not wish to expose himself to the chance of uselessly increasing the catalogue, already so numerous, of antiarthritic remedies. This caution, although it should lead to doubt, should not check efforts to extend the resources of art against so formidable an affection. In this persuasion, I (Dr. Gendrin) am going to mention a remedy which I have successfully used in treating gout, both to resolve chronic engorgements and the articular concretions which result from repeated attacks of this disease, and also to cure its paroxysms in the acute stage. This remedy is Iodine, the rational and proper use of which is without the least inconvenience.

I first employed it externally in chronic gouty tumors, because it had before been extolled in old swellings of the joints. Its resolvent action was so rapid, that I asked myself if it did not, in these cases, act on the nature of the disease? Following this indication, I used it against acute fits of gout, both externally and inwardly. Success in a violent fit of gout in a very strong man induced me to continue my experiments. Since that, seven patients with acute and violent gout have been completely cured by this remedy. In two only was the cure difficult. There it was necessary repeatedly to have recourse to the administration of the iodine, to prevent the paroxysms, and check their development when threatened. In all these cases, the continued use of iodine for two or three months after the complete cure of a paroxysm, has prevented its return. One patient has passed eight times when he should have had it, without its appearing. Another, five,—one, four,—and two only three, without relapse.

Of four gouty subjects with chalky concretions and chronic engorgement of the joints, two have been quite cured for more than four years, and only employed the iodine externally, but for a considerable time. One has been cured a year; and the fourth is now under treatment.

With all these patients, its action has been seconded by a regimen nourishing and slightly tonic for chronic gout, and demulcent in the acute gout.

I do not know (says M. Gendrin,) whether experience will continue to give as favorable results; but I make the present cases known that other practitioners may give the remedy a fair trial; and, if their experience of its utility corresponds to mine, that it might be generally adopted in the treatment of this disease. *(Revue Med.)*

Melancholia, with Loss of Voice, cured by the actual Cautery.—A man, aged thirty, of strong constitution and sanguineous temperament, was affected with profound melancholia and complete loss of voice. Numerous means were tried without benefit. It was then determined by Dr. Rossi to try cauterization on the vertex, by means of an iron heated to a white heat. This was done down to the bone. The next day the state of the patient was sensibly ameliorated, and answers, in a very low voice, could be got from him. As suppuration established itself, the intellectual faculties became freer; the voice alone did not improve. Purgatives were then had recourse to. The back part of the neck was covered with blisters, while the front was rubbed with ammoniacal embrocations. Internally, infusion of arnica, with camphorated ether; from time to time he was made to inspire ammonia; and at the end of two months of this treatment the health was quite restored. (*Repertorio di Torino.*)

Encephalitis cured by Acupuncturation.—G. Grassi, after being for a long time subject to frequent fits of dulness, caused by cerebral congestions, and which was removed by bleeding and purging, was seized with apoplexy, with hemiplegia, loss of voice, grinding of the teeth, irregular breathing, intermittent and sometimes scarcely perceptible pulse, without any signs of gastro-intestinal irritation. Repeated bleedings and purges brought him back to a pretty good state of health. At the end of some months all symptoms of local affection had disappeared; the pulse was regular; the voice a little returned, as well as the movements of the affected limbs in part, when Dr. Strambio proposed electro puncturation to complete the cure. Dr. Fantonelli performed this operation, which was done by inserting a needle at the lower part of the neck, on the side opposite to that affected; then another needle into the external ankle of the affected limb; a metallic wire, communicating with the two needles, was connected with a voltaic pile of five plates only. The introducing of the needles was not at all painful, but at each shock severe pains and violent contractions were induced in the muscles nearest to the needles, and chiefly in those of the affected side, (at the negative pile the pain was greatest.) After five or six shocks it was stopped, as the pain was intolerable.

The electro puncturation was repeated three times, with intervals of one day. After the first, the patient felt himself livelier, and moved more freely. At the second trial, he felt some inconvenience; and, on the third, he was seized with violent fever and symptoms of cerebral congestion. Bleedings and revulsives soon calmed this encephalitis, but his former ailments became just as they were before the trials were attempted. (*Giornale Critica di Med. Analitica, Milano.*)

Diabetes Mammané.—In a case of "diabetes mammané," an abundant flow of milk following delivery, M. Picquet, thinking it depended on uterine sensibility, applied leeches to the vulva, and thus cured the disease.

Case of Paruria Erratica, or Ureplania. By Salmon A. Arnold, M.D. of Providence, R.I.—Maria Brenton, aged twenty-seven years, of sound constitution, generally enjoyed good health until June 1820, when she was afflicted with a suppression of the catamenia, accompanied with hæmoptysis. The medical attendants, irregular practitioners, bled her profusely every other day, and, after the system had become greatly debilitated, injudiciously administered emetics, the operation of which was succeeded by a prolapsus uteri, and a total inability to perform the function of urinary excretion. In this state she continued for nearly two years and a half without any alleviation of the disease, though for the most part of the time under the care of respectable physicians. The urine had been drawn off by the catheter, generally every twenty-four hours; but, when this was neglected, she often perspired very profusely about the lumbar region.

In September, 1822, soon after I first saw her, the bladder not having been emptied by the catheter for seventy-two hours, the urine found an outlet by the *right ear*, oozing drop by drop, and continued for several hours after the bladder had been emptied. The next day, at five o'clock P.M. the discharge from the ear again commenced, and continued about as long as on the preceding, but a larger quantity was poured out. The fluid was thrown on a heated shovel, and gave out the odour so peculiar to urine, indicating the presence of urea. The discharge was repeated daily for several days, oozing out guttatim, commencing earlier, increasing in quantity, and being discharged in less time; then twice a day, at three and seven o'clock P.M., varying but very little for some days; then three times a day, at two, nine, and eleven o'clock P.M.; and continuing subsequently four times a day, at ten o'clock A.M., and four, eight, and eleven o'clock P.M., increasing gradually in quantity, and being discharged in less time, until a pint was discharged in fifteen minutes in a stream about the size of a crow-quill; then becoming more irregular, being discharged every four hours, and increasing in quantity until eighty ounces were discharged in twenty-four hours. The discharge from the ear was accompanied by a severe pain over the right eye and about the right ear, with a distressing sensation of fulness. The pain commenced early in the morning, and continued to increase in violence until after the discharge from the ear, by which it was relieved.

When the urine was not discharged at the usual period, or much diminished in quantity, the pain and distress were most excruciating, producing delirium, during which confinement was frequently necessary to prevent her from doing violence to her head. Sometimes a deficiency of the discharge would produce delirium, apparently without much pain: she would then laugh, sing, and converse very incoherently, though frequently with an unusual degree of wit and humour. At other times she would be seized with violent spasms, resembling opisthotonos; and, after continuing in this situation for a few minutes, the muscles becoming relaxed, she would heave a deep sigh, and then swoon, and remain in an insensible state for about half an hour, when she would sob, perhaps open her eyes, and, after repeatedly sighing, would again become insensible. In this condition she would frequently remain for more than twelve hours in succession. Sometimes the spasms would be unaccompanied with swooning; at one time her jaws were firmly closed for twenty-four hours, so that it was impossible to force them open, and at another time they continued closed for more than three days. The swooning would frequently be unaccompanied with spasm, and she would continue insensible for more than twenty-four hours, the pulse imperceptible at the wrist, and respiration only perceptible by the nicest observation. The sight of the right eye was soon destroyed, and frequently that of the left was so impaired that she could not distinguish any object across the room; but the latter is now entirely restored. The hearing of the right ear is much impaired, she cannot distinguish sounds with it; and there is a constant confused noise heard by her, like the roaring of a distant waterfall. For a short time previous to the discharge from the ear, there is a very audible noise, resembling that produced by water slowly dropping into a vessel, which may be heard at the distance of several feet. She has no power, excepting by an inclined position of the head, over the discharge, previously to which there is a painful sensation of fulness and a burning heat about the right ear. The next outlet the urine found was by the *left ear;* a few moments previous to which discharge a noise is heard similar to that noticed in the right ear: she cannot hear distinctly for ten or fifteen minutes before and after the urine passes off. This discharge is very irregular, sometimes three or four times a week, and then is discontinued for months. Soon after the discharge from the left ear, the urine found another outlet by the *left eye,* which commenced weeping in the morning and continued for several hours, producing considerable inflammation. It continued three days, and then ceased. A sufficient quantity of the fluid was saved to test its properties; in which, as well as in appearance, it did not differ from the discharge from the ear.

In the summer of 1824 it recommenced, and continued daily for about six weeks.

On the 10th of March, 1823, urine began to be discharged in great quantities from the *stomach,* unmixed with its contents. The greatest quantity was generally discharged in the morning before taking food, but it was frequently discharged soon after food had been taken, with which it was often entirely unmixed. This discharge has been more regular than from the left ear and eyes, but less so than from the other outlets.

On the 21st of April, the *right breast* became tense and swollen, with considerable pain, and evidently contained a fluid, a few drops of which oozed from the nipple. The swelling and pain continued about twenty-four hours, and then entirely ceased for about a week, when it again returned, and there was discharged a light yellow fluid resembling urine. On the 29th, one ounce was caught in a nipple shell, which, by analysis, was found to contain urea. This discharge has been very regular up to this time. Urine has been discharged occasionally from the *left breast.*

November 20th, 1823, the urine from the breast became milky, having the appearance of milk considerably diluted with water: this continued until December 12th, when it gradually resumed its usual colour.

May 12th, 1823, the abdomen, about the hypogastric and umbilical region, became violently and spasmodically contracted into hard lumps, and a sharp pain was felt shooting up from the bladder to the umbilicus, around which there was a severe twisting pain; in a few days subsequently a loud noise was heard, similar to that produced by drawing a cork from a bottle, and immediately afterwards urine spirted out from the *navel,* as from a fountain. This discharge has since continued, and has rarely been interrupted for many days. Nature, wearied in her irregularities, made her last effort, which completed the phenomena of this case, and established a discharge of urine from the *nose.* This discharge commenced on the 30th of July, 1823, oozing in the morning guttatim, and increasing in quantity every day until it ran off in a considerable stream. It continued daily for about two months, when it ceased until the summer of 1824, and then again commenced, and continued almost daily for some months, since when it has entirely ceased. All the fluids discharged were found, by analysis, to contain urea.

The following is the analysis of the fluid discharged from the right ear, made in New Haven, under the direction of Professor SILLIMAN: "Alkaline sulphates were indicated by muriate of barytes and acetic acid; muriates were detected by nitrate and acetate of silver, and by nitrate of mercury; phosphates were ascertained to exist by the addition of caustic, ammonia, and lime-water. Urea was obtained in the usual manner, by evaporating the fluid, and redissolving in alcohol, and again evaporating."

The urine discharged from the ear was, during the first six months, hotter than that from the bladder, producing by its heat pain in the external ear. The urine from the bladder turned black when not drawn off at the usual period, and deposited a sediment resembling black sand. Sometimes, after this black sediment was precipitated, the fluid would be of a dingy yellow colour; at other times it would be as black as ink. The urine from the bladder was frequently of a very high colour before it turned black, but often turned black, when it was as perfectly limpid as spring water; and on several occasions it has been noticed that, when it was most limpid, the largest quantity of black sediment was precipitated.

The discharges from the other outlets have occasionally all turned black. They differ, however, in one respect from the discharge from the bladder, since from the bladder it has never come off black, while it has from all the other outlets. This changing of colours in all the discharges from the different outlets, at the same time, is a most convincing proof of the identity of the fluids discharged.

Since the obstruction of the catamenia, there has been a discharge of blood, supposed to be vicarious: it has generally come on every five or eight weeks, sometimes at the regular period. For the first two years there was a discharge of blood, occasionally from the stomach and lungs; from the right and left ear, oftener from the left; from the right and left breast, more frequently from the left; from the navel, and from the nose. From the nose and the right ear, it has generally been mixed with urine, nearly three-fourths urine; from the left ear with about equal parts of urine and blood; from the stomach and lungs with the contents of the stomach and the secretions of the fauces; from the left breast and navel it has generally been unmixed with any other fluid. It was frequently fœtid; the colour always dark; it sometimes, though not generally, coagulates. When the urine was not drawn from the bladder for forty-eight hours, or longer, the quantity found in it was always less than when drawn off every twenty-four hours. Sometimes, when the urine was not drawn off from the bladder for seventy-two hours, it would be found to contain only one or two ounces. From which I was induced to believe that the discharge from the bladder was almost entirely useless, and that the functions of the system might be performed with very little disturbance, without the excretory office of the bladder. Accordingly I omitted to draw off the urine for seven days, when three ounces only were found in the bladder, during which period the discharges from all the other outlets were increased, and her health did not appear to have in the least suffered. Both the quantity of fluid drank, and the quantity discharged from all the outlets during the twenty-four hours, was for several days ascertained, and the difference found small. When the urine was drawn off from the bladder two or three times a day, the quantity discharged from all the other outlets was much decreased; from which I was induced to think that, if it should be drawn off every two or three hours, it would be prevented from passing into the system, and being discharged from the other outlets. I therefore introduced an elastic gum catheter, and directed the urine to be drawn off every two hours, but the catheter in half an hour would be filled up with a thick glutinous substance. This was frequently repeated with no better success. Numerous instruments were invented, and, when used, were all equally unsuccessful. Pessaries of every description, and other means to restore the parts to their natural situation, were used, and for a long time continued without any advantage. The quantity of urine discharged from the outlets was so great, and so much beyond what has been thought possible, that I was apprehensive there might have been some deception. To remove every doubt, I and my friend Dr. Webb, who at my request had occasionally attended her, remained with her four hours alternately, during twenty-four hours, and the quantity discharged during this time was as large as it had been for several days previous to and after this period. There has never been any doubt that these fluids, which have proved to be urine, were actually discharged from the ear and the other outlets, since the fact has been proved, day after day, by occular demonstration.

This great disturbance in the system continued to increase for nearly six months, and it was the opinion of all who saw the patient that she could not survive from day to day; after which period it gradually abated, and she is now, when the urine is freely discharged, so much relieved that she is able to walk about her room, and, during the summer of 1824, frequently rode out. The discharges from the right ear, the right breast, and navel, continue daily, but they are not so great nor so frequent as they were a year since; from the bladder the quantity is as usual; from the stomach, nose, eye, there has for some months been no discharge. (*American Journal of Medical Sciences.*)

Vicarious Urinary Discharge.—The only case which bears much resemblance to the above that we recollect having seen an account of, is the one related by Dr. SENTER, in the first volume of the Transactions of the College of Physicians of Philadelphia. As that work has but a small circulation, the following condensed account of the case will no doubt be interesting.

Lucy Foster, a servant maid, æt. fifteen, fleshy and healthy looking, commenced to menstruate at the age of thirteen, and continued regular until about the latter end of May, 1785, at which period, the menses not appearing, and being exposed and negligent of her health, her mother supposed she had taken cold. On the 1st of June she was attacked with pain in her left hypochondrium, with cough, fever, oppression at her breast, with dyspnœa, and great irritability of the stomach. About the middle of July she vomited a quantity of bloody pus. She had a suppression of urine for twenty-four hours, which was relieved spontaneously.

In about two months she had recovered so far as to be able to return to her usual occupation, her menses returned, and continued well until June 1786, when her old complaints, with the exception of the suppression of the menses, returned with greater severity than before. The irritability of her stomach was so great that she rejected almost every article of nourishment or medicine that was given her. Opium afforded the most permanent relief.

On the 2d of July she was seized with a total suppression of urine, without any perceptible cause, which continued five days.

The beginning of the 6th day she was taken with a vomiting, and she brought up water, which she said tasted in every respect like urine. As her vomiting continued, she found relief in the bottom of her belly, from the swelling and great soreness she had felt for several days.

She now thought herself much better, but her vomiting recurred the next day, and continued more or less every day till the 14th of the month.

As she had discharged from her stomach every thing she ate or drank, from the time of her first vomiting, she did not suffer so much from the ischury as she did before the first evacuation. Dr. Senter prevailed upon her to let him pass the catheter into the bladder, whence he drew about three pints of urine, clear, but high coloured. Her strength was very much exhausted, and she felt great heat and soreness throughout the abdominal viscera.

For ten weeks successively, she was incapable of retaining in her stomach any thing except opium.

From this time to December, she continued with very little abatement of her distress; and, as she could lie in no other position, she was constantly supported in an armed chair, in a reclined posture, with pillows under her hips.

Whenever I omitted to draw off her water once in thirty or thirty-six hours at farthest, she never failed to vomit it up. To ascertain so extraordinary a fact beyond the possibility of a mistake on my part, or a deception on hers, I often visited her about the time I knew she must vomit if the catheter was not introduced; and I examined her bladder, found it full, hard, and tender; and sat by her till the vomiting recurred, saved the water that she brought up this way, and compared it with that I drew off, and found it the same in every respect.

In the month of January, 1787, from some cause unknown, she could not be relieved with the instrument, nor could she vomit up her urine for several days; when it passed off by the *navel* for three days successively; after which the catheter was used with the same effect as before.

About the beginning of August, a brick-coloured gravel began to pass off through the catheter, and soon became so large and plentiful that neither urine nor gravel could be completely evacuated by the instrument in its usual form.

She continued to discharge gravel this way, whenever her urine was drawn off, till the beginning of November, at which time she felt more distress than usual whenever her urine came off by vomiting, and she soon observed a gritty substance in her mouth. When I was informed of this new phenomenon, I requested her to save the urine for my inspection the next time she vomited. I compared this with what I drew off, and found it contained the same kind of gravel as that which passed the catheter.

From this period to the summer 1788, her complaints continued much the same. When her water was not drawn off, she always brought it up by vomiting, commonly attended with great pain in the head. The hypogastrium now became more tumid and tender, and her bladder appeared very much thickened, and extremely sore, even after it was evacuated. Add to this, the apparent inequality of the surface of the bladder was so great, and the tumor shifting sometimes towards the right and at others to the left inguen, according as her body was moved, that I began strongly to suspect a stone.

Through the month of September, her urine could very rarely be drawn off; for, upon the introduction of the catheter, a spasm seized the urethra and neck of the bladder, and, though the instrument appeared to pass high up into the fundus of the bladder, not more than a gill could be drawn before it stopped entirely, with a sensation of something falling down against its cervix, which she was very confident was a stone.

In the course of this month she vomited more sand than she had at any time before, and failed in strength and spirits so fast that I was apprehensive she would not live the month out. Her urethra, bladder, and external genital parts, were so extremely sore, that, for some time, it prevented my searching her for the stone in the manner I intended.

About the beginning of October I was able to introduce the sound, when I readily met with a stone, which appeared of a small size, and rather softer than urinary calculi commonly are. I repeated the examination a number of times, till I was perfectly satisfied that this was the case.

During the remainder of the fall, and principal part of the winter ensuing, the same troublesome sensation of the falling down of a stone in the bladder, upon the use of the catheter, continued, and induced the most excruciating pain and misery imaginable.

Her bowels, for the most part, were much less constipated than could have been expected, considering the frequency of vomiting, her supine situation, and the little nourishment she was able to retain upon her stomach; and during the whole of her disease, till within three months of her death, the catamenia were irregular. Sometimes they appeared every fortnight, and at others she passed the regular period for that evacuation two or three months, without having any; but it did not appear to me that her disease was much influenced by either.

Early in the spring 1789, her urine began to pass per anum, loaded with the same kind of gravel that had come away by the catheter. This gave her some respite with respect to her vomiting, though she continued to throw up more or less urine as well as gravel that way every week.

This new course of her water gave her a very troublesome tenesmus; but the stone in the bladder, as well as the pain and disagreeableness arising from the sensation of its descent, became daily less fatiguing. Her strength and spirits decayed fast, and the fever that she had before continually laboured under grew more completely hectical.

After the 13th of May, her bladder never became so much distended with urine as it had been before; and both this and the gravel now generally passed her once in twenty-four hours, either by vomiting or purging. She, however, introduced the catheter herself, and sometimes drew off her urine to the quantity of a gill.

The secretion of urine, as well as the formation of calculi, evidently diminished, in proportion to her loss of strength and the increase of the diarrhœa. The menses entirely ceased.

During the latter part of spring and autumn, she became quite paralytic at times; the frequency of vomiting increased, and she had several convulsion fits after vomiting. She grew more and more emaciated; her convulsions returned more frequently; her fever was more putrid; she at last became lethargic, and, on the 11th of August, death, which she had long and ardently wished for, put a period to a series of the most complicated and singular misery that I have ever seen since my acquaintance with disease.

The day after death, Dr. Senter examined the body in the presence of Drs. Waterhouse and Mason.

Thorax: In this cavity there was nothing appeared unnatural, except a came on about three weeks after the accident had occurred, and continued till his death. From lying on his back, the integuments sloughed extensively. After some days sensibility returned, and also the power of motion. On the back nothing peculiar could be observed, excepting a different colour of the skin, which could be seen at the place of injury. His urine had a peculiar smell.

One morning, his sores suppurating well, and his health, though weak, better than it had been, he told me that when he touched any part of his body below the place which had been injured, which was somewhere between the second and sixth dorsal vertebræ, he felt a sudden sensation shooting from the parts touched to his toes, and not in the direction towards the head. The parts from which this peculiar sensation proceeded were those which were paralytic, and those only. The other parts had their natural feeling: the former had that numb and prickling peculiarity of sensation which results from the pressure of a nerve, or, as it is usually expressed, the patient said his limbs were asleep. The susceptibility of being stimulated by the touch had entirely left the legs when I touched him last, and I left him to see how long the excitability would be accumulating. I neglected to examine him for some time after. In five days I found that this peculiar quality not only extended to the middle of his back, but up to his head. It was sudden and convulsive: on slightly touching him, it produced no effect; but, if I pressed my finger with more violence, the sensation flew to his head; but this was the case only when I pressed on the muscles, and particularly these of the thigh. Pressure on the tendons did not excite them. This peculiar sensibility was greatest after sleep, and, after rubbing the muscles two or three times, it left the parts entirely: those parts, however, which were not rubbed still retained it.

In the evening, I pressed upon the knee; then the sensation flew to his head and his feet. The head itself was, however, not affected. Squeezing the toes also gave him the same sensation: at this time it extended to his brain, and gave him an indescribable feeling. In this experiment, the muscles, on drawing the fingers along them, lost the power of exciting this peculiar feeling; still, squeezing the toes of the same side excited it. The skin also produced this phenomenon on being excited by pressure or rubbing.

A few days before his death this peculiarity ceased, and, as we had no opportunity of examining his body, we are entirely in the dark with regard to the nature of the injury, or the cause of the appearances above described. (*Philadelphia Journal of Medicine and Surgery.*)

SURGERY.

On a Case of Wound of the anterior Tibial Artery.—A very interesting case of wound of the anterior tibial artery occurred some time since to the editor of this Journal, attended with phenomena exceedingly interesting in relation to the physiology and pathology of the circulation, and very well illustrating principles advanced by Professor SMITH, of Yale College, in an article on the pathology of the arteries published in the fifth Number of this Journal.

The patient, a Mr. Blodget, of Jericho, Vermont, wounded the anterior tibial artery, a little below the middle of the leg, with a narrow chisel, which entered from the outside of the leg, just anterior to the fibula, and divided many of the fasciculi of the exterior muscles which envelop the artery. Undoubtedly the artery was merely partially divided by the angle of the instrument. I infer this from the effects which resulted.

At the instant of the wound there took place a copious gush of blood, which very much alarmed the patient and friends. Dr. **Hamilton**, an intelligent young physician, was sent for, who, on his arrival, found no difficulty in suppressing the hemorrhage for the time by means of compression. As he had reason to believe the artery completely divided by the instrument, he presumed that, the pressure being continued, the hemorrhage would not recur. The patient continued apparently to do well, no more than the usual degree of inflammation supervening, until the end of two weeks, at which time, on attempting to make a greater effort than usual with the limb, blood gushed from the wound as furiously as when the limb was first wounded. Dr. H. was immediately called, and, on his arrival, the hemorrhage was commanded as before by employing pressure. The limb being at this time a good deal tumid, from diffusion of blood in the cellular tissue, Dr. H. presumed that the artery could not be found by searching the wound.

After this the bleeding occurred at intervals for two or three days, when I was called to the patient at Dr. Hamilton's request. We agreed that, as the wound was remote from anastomosing branches, and as the vicinity of the wound was much injected with blood, the best method would be to cut for the artery above the wound, and very near the middle of the leg. I immediately proceeded to the operation, and without much difficulty exposed the artery where it lies deeply imbedded between the tibialis anticus and flexor communis muscles. A ligature was thrown round it, not without some embarrassment, in consequence of its depth and the tension and volume of the muscles. Before tying the ligature I held my finger upon the artery, and distinctly felt its pulsations, and, in order to assure myself that the artery was included, I drew upon the two ends of the thread, and immediately the artery ceased to beat. This I repeated several times, so that there could be no doubt that the artery was secured. The ligature was then firmly tied, and immediately the pulsation, which before could be seen in the orifice of the wound, ceased entirely, and the blood also ceased to flow.

As the hemorrhage did not return, I left the house with very little apprehension as to the result. As I was many miles from home, however, I slept that night in the neighbourhood. In the morning I was much surprised at being called in haste to visit the patient on account of the return of the bleeding. On my arrival, however, it had again ceased; yet there was obviously a pulsation in the wound, similar to that which had been observed before the operation.

On applying my finger to the anterior tibial, upon the instep, (where all pulsation had ceased immediately after tying the ligature,) I was surprised to find that the artery pulsated vigorously, and, on comparing its beat with that of the opposite foot, I was still more surprised to find that it was much stronger and more full in the wounded limb than in the other. To ascertain the direction of its current, I then placed one finger upon the upper part of the artery, and, pressing it firmly so as to stop its circulation, I felt for its pulsations below, and found them still vigorous. I then reversed this, and found that the blood was passing in a full stream in the retrograde direction.

I thought it advisable, before attempting any thing further with the knife, to endeavour to prevent the recurrence of bleeding by compressing the artery upon the top of the foot. This was accordingly done, and apparently considerable adhesion of the right lobe of the lungs to the pleura. Abdomen: The omentum was principally wasted, but not more than is commonly the case with those who die tabid: it was, however, of a dark gangrenous colour pretty generally. Stomach: This appeared very much changed from its natural colour, and in a gangrenous state, containing a semi-purulent matter of a fœtid scent. Liver and gall-bladder: There were no preternatural adhesions of the former, nor gall-stones in the latter; and their colour, &c. not unusual. Intestines: In these there were no ruptures either of their muscular coats, blood-vessels, or lymphatics, that we could discover. The villous coat was much destroyed, and the colour of the intestines darker than is common, except the duodenum, which was very much discoloured with the bile. Kidneys and ureters: In these there was no considerable deviation from a state of soundness; they were lax or flabby, but no rupture of any of their vessels or any calculi discoverable. Urinary bladder: This was in its natural situation, not the least thickened, had no sand or gravel in it, nor did it adhere preternaturally to any of the circumjacent parts; and the muscular sphincter of its neck yielded readily to the introduction of the finger from the bladder into the urethra. Uterus: In its cavity was contained about a drachm of thick, darkish, fœtid pus; but no other appearance of disease in its body. Tubæ Fallopianæ, were larger than common in virgins, and strung with several hydatids or vesiculæ, the size of a walnut, filled with a watery glutinous humour. Corpora Fimbriata, had a gangrenous appearance. Ovaria, were enlarged to the size of a small hen's egg, and contained a considerable quantity of a clear limpid fluid immediately under the first coat.

Case of Hydatids of the Uterus, successfully treated by the Ergot; by W. D. Macgill, m.d. of Hagerstown, Maryland. Communicated in a Letter, from Dr. J. W. Anderson, to Dr. Dewees.—I take the liberty of writing to you, to state, though not very minutely, the result of a case of hydatids of the uterus which came under the observation and treatment of my much respected preceptor, Dr. W. D. Magill, of this place. And I the more readily communicate this case to you, as you have expressed your intention of making use of the remedy which was employed in this instance, if an opportunity presented itself. It therefore gives me much pleasure in writing this letter, which I flatter myself will not be unacceptable, as it so completely confirms (as far as one case can do,) your sentiments in regard to the treatment of this disease.

Early last spring, Dr. M. was called to see Mrs. W., aged forty years, who had previously enjoyed good health, and had been the mother of several healthy children. She was labouring under a very painful affection of the womb, accompanied with periodical hemorrhagy, occurring once in twenty-four hours, usually in the evening, accompanied with febrile symptoms and much disturbance of the digestive functions, and which was evidently making rapid inroads upon her constitution. During its further continuance, her stomach became exceedingly irritable, so much so indeed as scarcely to retain nourishment of any description. Dr. M. addressed his remedies principally to the restraining the hemorrhagy, and obviating the excessive weakness of the stomach. But, notwithstanding, the symptoms continued to increase in violence, so much so as to endanger the life of the patient. She had become very much exhausted by the repeated loss of blood, and inability to take nourishment, (for she had now suffered for more than three months,) when the Doctor made an examination per vaginam, (after having made them frequently before without any satisfactory result,) and discovered something protruding through the os uteri, which he extracted, and found that the poor woman was labouring under hydatids of the womb. He immediately sent for the Ergot, judging from analogy that it would prove decidedly effectual in producing an expulsion of the heterogeneous mass. The event proved that he was not mistaken in his conjecture; for he had given the Ergot but a very few minutes when it began to show its specific operation upon the uterus, and soon ended in a complete evacuation of its contents. The mass of hydatids equalled in size the head of a large child at birth, and afforded a very good specimen of the disease; a part of which we have made a preparation of. The representation in your book on the Diseases of Women is admirable. The floodings immediately ceased, and did not return. The woman rapidly recovered, until she has at length attained her former health and vigour, and I believe she is again pregnant. She says her mother died of a disease exactly similar. (*American Journal of the Medical Sciences.*)

Notice of the Efficacy of Tobacco in Cynanche Trachealis. By N. CHAPMAN, M.D.—Two years ago I was called to visit a lady in croup, whom I had frequently attended before in attacks of the same disease. Having used the ordinary remedies to a great extent without any decided impression on the case, it occurred to me that relaxation of the spasm of the larynx, which evidently existed, might be induced by tobacco, and accordingly directed the smoking of a cigar. Nausea was created in a few minutes, and I had the satisfaction to witness a subsidence of the affection, followed by an entire cure, without the interposition of any other means. Delighted with the efficacy of this very simple remedy, she has since exclusively relied on it, and in all the attacks of the disease, which have been numerous, for she is hardly ever exposed to its causes without suffering in this way, she has found it equally successful.

Every case of spasmodic croup which has subsequently come under my notice has, in the early stage to which I consider the tobacco only applicable, so readily yielded to the common measures, that I have had no occasion to give it a further trial. But, in several instances of the same condition of asthma, I have used it with great advantage.

Much discussion has taken place relative to the pathology of croup, whether it be of a spasmodic or inflammatory nature. It is probable that, whenever it suddenly comes on, it must be essentially of the former character, as some time is required to induce phlogosis, which is the result of a much slower process. No cause, however, more rapidly promotes it than spasmodic constriction, and hence no long period elapses till inflammation becomes established. That such a view is correct, seems to be confirmed by the symptoms, the treatment, and the post-mortem appearances in these cases. (*Ibid.*)

PATHOLOGY.

A curious Phenomenon resembling Electricity in a Case of Injured Spine. By S. COLHOUN, M.D.—Anderson Garden received an injury of the spine, and, when he became the subject of the following observations, was paralytic, from the umbilical region downwards, with incontinence of urine, which cerate, had all failed in removing these crusts; but by means of the lead they fell off without effort, and permitted again the cutaneous transpiration.

3d. Emboldened by this success, he did not hesitate to employ the same means with sores in a state of hospital gangrene, and with decided good effect.

In conclusion, he adds that this mode of treating ulcers offers the immense advantage of diminishing pain, resisting the tendency to erysipelas, thickening the edges, modifying suppuration, in fine, of causing solid cicatrices.

Reduction of a Shoulder which had been dislocated seven months.—Professor SMITH, of New Haven, has recently effected the reduction of a dislocated humerus seven yearly months after the occurrence of the injury. The patient was a young woman.

In this case no pulleys, nor any means whatever, were employed to multiply mechanically the extending force exerted upon the limb. Moderate extension was effected, and the usual motions impressed upon the extremity of the bone caused its head to glide into its socket. (*Philadelphia Monthly Journal of Medicine and Surgery.*)

Reduction of a Femur which had been dislocated for three months.—Dr. MORRIS, of Ohio, has recently furnished Dr. SMITH, of New Haven, with the statement of a case in which, without employing any other mechanical means than the hands of assistants, the reduction of a dislocated femur was effected, after it had been for three months displaced.

There are very few, if any, cases on record, in which the use of pulleys has accomplished more than did the unassisted art of the surgeon in the above. We believe it will ultimately be admitted by all scientific surgeons, that force contributes infinitely less to the reduction of dislocated bones than that kind of art which is founded on a correct and minute knowledge of the anatomy and mechanism of the joint, and on a dexterous employment of manual force. By using the bone itself as a lever, the centre of motion being the point where the resisting muscles are inserted, a very great power can be exerted on the head of the bone, and of that kind which is adapted to the necessity of the case; for the head of the bone will be approximated to the socket at the same instant that the muscles are extended.

When the pulleys are employed, it is obviously impossible that, during their action, the direction of the force can be varied, or the position of the limb in the least changed. But we know that the position of the limb ought to vary with every degree of extension, and that the head of the bone should be suffered to obey the configuration of the parts, and the action of those muscles which greatly assist in approximating the head to the socket. In the hands of assistants, the direction of extension can be varied in a manner suited to these circumstances, and as much force can be applied as is safe or proper. The last motion, which slips the head of the bone into its place, is almost always exerted by the muscles, and the assistants generally feel a sudden jar of the limb at the instant of its reduction. To this effort of the muscles the elastic force of manual extension will yield, and suffer the limb to obey the natural effort. The pulleys, on the contrary, exert an inelastic force which will not yield, and the above advantage is in a great degree lost.

In a great many instances on record, *accident* has reduced dislocated bones as it has dislocated them. This has frequently occurred in dislocations of the femur. The force which, in these cases, draws the head into the cup, is evidently that of the muscles, which, in consequence of a favorable flexion of the limb, are made to act in the most advantageous manner.

Several cases have occurred in the hands of distinguished surgeons, in which, after the most powerful efforts with the pulleys and with hands, the bone has been accidentally replaced by the hands of the surgeon alone, when moving the limb in various directions to ascertain its position, or to overcome a fancied resistance in the capsular ligament. An accident of this kind occurred in the hands of a surgeon of pre-eminent skill and reputation in this city. These accidents should be studied with the utmost care. They certainly indicate the true means of effecting these reductions. If employed understandingly, they would, with precision and uniformity, produce those results which have been fortuitous. There is a great fault in our surgery when accident accomplishes more than art. (*Ibid.*)

A Case of Dislocated Humerus, reduced ten months and a half after the Displacement. By **Nathan Smith, M.D.** Professor of Surgery in Yale College. —This was the case of a lady in Derby, Connecticut. The humeri had both been dislocated into the axillæ by a puerperal convulsion. One was reduced by Dr. Smith at the end of seven months and a half after the accident, and has already been noticed in this Journal. It was thought not prudent to attempt the reduction of the other shoulder at that time, and another occasion did not present till the above time had elapsed. The reduction was then accomplished without the use of violent force or any mechanical apparatus. Gentle and long-continued extension was made upon the member; the knee of the surgeon was then placed beneath the axilla, and the bone being employed as a lever, the head was, without much difficulty, conveyed upward into the glenoid cavity.

The result of these cases should encourage us to attempt more frequently than is done the reduction of old dislocations. We believe that the frequency of failure in such attempts is often owing to the injudicious employment of the mechanical powers, it being presumed that the reduction of such requires the exercise of great force. (*Ibid.*)

A convenient Mode of reducing certain Dislocations of the Humerus.—Our distinguished friend, Dr. **Belville**, of Trenton, communicated to us, verbally, a few days since, a case of dislocation of the shoulder, in which he effected the reduction in the following ingenious manner:

The patient was intoxicated and very refractory, which made it extremely difficult to effect the reduction in the usual position. It occurred to the Doctor, therefore, to place him upon the sound side on the floor, and to effect counter-extension and the confinement of the patient at the same time, by passing a folded sheet beneath the dislocated shoulder, and directing an assistant to stand on it on each side of the patient, so as to confine him to the floor. The surgeon then grasping the wrist, made extension upwards, which can be done in that position with peculiar advantage, since we can *lift* with more power than we can pull horizontally. Counter-extension being made upon the scapula by the hand of an assistant, and the usual flexions impressed upon the bone, it was without difficulty reduced to its place. (*Ibid.*)

with good effect. As, however, I could not remain with the patient to witness the result, I advised Dr. Hamilton, should the bleeding recur, to cut down upon the region of the wounded artery, and endeavour to make compression upon the wounded vessel. This he was subsequently compelled to do, and with difficulty he saved the limb.

This case is particularly interesting in regard to the manner in which the circulation was kept up in the wounded limb.

It is obvious that the increased pulsation in the artery could not have been owing to an increase in the *vis a tergo* of the heart; for, were this the case, that of the other limb should have corresponded. The stream of blood received by the artery must necessarily have been smaller than usual, if the arteries be regarded as passive. The fulness of the artery, and its active beat, are to me conclusive evidence that the arteries exercise, in the circulation, a power which is independent of that of the heart, and which is influenced by the action of the capillaries in the inflamed part. (*Ibid.*)

Case of Excision of a Part of the Spleen. By W. B. Powell, M.D. of Ky. —In the latter part of May, 1826, J. F. was stabbed in the left side, about four hours previous to my seeing him. I found the wound covered with soot and flour, which the matrons present had applied to stop the hemorrhage. The patient was quite ungovernable from inebriation. After cleansing the wound, I found nearly two inches of the spleen protruded through an incision that had been made between the second and third false ribs, about four inches anterior to the spine, by a knife or large dirk, directed downwards, inwards, and forwards, to the cavity of the abdomen. Upon inquiry, I learned that the individual had eaten, as well as drank, but a short time before the riot, to an intemperate extent. Having satisfied myself with regard to the nature of the protrusion, I intended to attempt its reduction, but was prevented by discovering a slit in the protruded extremity, near one inch in length, which induced me to believe that such an act would endanger the patient's life from internal hemorrhage, though but little blood followed the wound, in consequence of the stricture by the lips of the wound. Hence, as the night was considerably advanced, having no other light than that of a very indifferent lamp, the patient being intoxicated, and having no disposition to pass a ligature and amputate upon my own responsibility, I deferred doing any thing more until nine o'clock next morning, when I was accompanied by Dr. Bennett, of Newport, Ky. At this time we both examined the case, and were satisfied that the protrusion consisted of one extremity of the spleen, in a high state of inflammation. In consultation, Dr. Bennett thought that we could institute no practice that would result in the recovery of the patient, from the complicated character of the wound, and the patient's habits of intemperance: hence, in his opinion, it was of no importance what was done, as he believed that death from peritoneal inflammation would ensue before the termination of the fourth day.

From my own views of the animal economy, the evidence of others relative to operations involving the peritoneum, and my own experiments upon inferior animals, I was induced to believe that a more favorable result might be hoped for. The patient was about thirty years of age, possessing but little nervous irritability, and had not prosecuted his habits of intemperance to the production of organic, or even manifest functional disease: consequently, I considered his system as possessing strong recuperative powers.

With such views of the case, I prepared a ligature from a slip of a tendon, taken from a beef's hock that had been some time in brine, and passed it around the stricture formed by the external incision, and then amputated the protruded portion. I then attempted to make a perfect reduction of the spleen, but found it impracticable, without the use of injurious force, to get the amputated extremity of the spleen below the diaphragm, because of the great contraction of that muscle.

Believing, as I did, that his system was competent to the removal of that portion of the spleen contained above the incision made in the diaphragm, I did not hesitate to let it remain, as it was reduced within the thoracic parietes: hence I closed the external wound, took a pound and a half of blood from his arm, put him to bed, prescribed light diet, and an absence from company.

On the third day, his pulse, skin, &c. indicated an unusual degree of constitutional excitement, when I ordered Tartris Antimonii, with the Sal. Soda, in small doses, and bread and milk poultices to the wound.

On the fourth day, healthy pus was discharged from the wound: this discharge continued three days, and then (I suppose) it was discharged internally, produced or followed by symptoms of peritoneal inflammation, which yielded to the administration of the above-named medicines, with warm fomentations and evaporating lotions to the abdomen.

After this he continued to improve, and on the fourteenth day was discharged from my care, though the wound was not entirely cicatrised. I saw him nine months after, when he informed me that the wound was perfectly healed, and that he enjoyed excellent health. (*American Journal of the Medical Sciences.*)

Kidney Beans passed through the Canal of the Urethra.—A man, about eleven months ago, introduced a kidney bean into the bladder, which produced all the symptoms of stone. Examination by the catheter gave very obscure signs of it. M. Civiale introduced his lithotriptor into the bladder, to measure the size of the foreign body: he laid hold of it, and squeezed it, proposing to extract it next day; but next day it came out of itself. It may be remarked, that the concretion which covered it was hardly the thickness of the twentieth part of a line.

Application of Plates of Lead to Wounds.—M. le Baron Yvan, head surgeon of the Hotel Royale des Invalides, in a letter to M. Reveille Parise, gives us the result of his extensive experience on the dressing of wounds by the application of thin plates of lead. 1st. The first trials were made on large chronic ulcers, of disgusting aspect, abundant suppuration, foul bottom, callous edges, and with most a tendency to erysipelas to some distance. The first day of the application, the pain was diminished, the suppuration changed its nature, inflammation yielded, and the edges in thickening also contracted.

2d. The extremities, which were covered with thick crusts, were equally wrapped up, as in elephantiasis. Baths, poultices, styrax plasters, sulphur

MATERIA MEDICA.

Balsam of Copaiba.—To take away the disgusting taste of this remedy, M. Dublanc, jun. proposes to substitute for the balsam itself its volatile oil, which it is easy to extract from it. The resinous part has scarcely any power, but the oil is most efficacious He has tried this on thirty-three patients, who were all cured in five or six days. The dose of the oil may be as much as thirty-six "grammes," beginning with from four to six daily. It may be given either alone or in any aromatic vehicle, or in the form of electuary or pills with three-fourths of its weight of soap, or in lavement mixed with mucilage, or with yolk of egg. M. Dublanc uses it in this form:

> ℞. Syrup. Tolut. ℥ij.; Aq. Menth. distill. ℥iij.; Laudani Sydenhami m. xvj.; Alcoholis Copaibæ ℥iij. M.

The alcohol of copaiba is the essential oil distilled anew with two-thirds of its weight of alcohol, 36°, so as to render it more volatile and free from smell.

Oleum Ricini.—M. Langier states that the repeated employment of this oil as a purgative has twice produced on himself a pruriginous eruption, or redness and itching, at the wrists and bendings of the knees, yet the oil was neither rancid nor bitter.

INTELLIGENCE.

MONTHLY REPORT OF PREVALENT DISEASES.

The severe north-east winds, which have prevailed during the greater part of the last month, accompanied as they were for many days by the attractive brilliancy of the sun, have produced a decided increase in the list of diseases. Bronchitis has been very common, and, in several cases we have witnessed, more than usually severe. When the complaint had passed on to the chronic state, emetics were of much advantage. Many cases of Paralysis have occurred. Four individuals have been attacked with hemiplegia, in the highest rank of society. In one, electricity was productive of some advantage. During its application, the arm, which at other times was perfectly motionless, was thrown into slight action. In children, remittent fever has been common, and, as usual, tedious in its cure. Ague has also been more than usually frequent for London. We have not met with any case which has resisted the sulphate of quinine, given in one and two grain doses every four or five hours during the intermissions.

Stammering.—The following certificate has been sent to us for publication, and the respectability of the names attached to it induce us to comply with the request:

The undersigned deem it a duty they owe, not less to the public than to the individuals concerned, to state that on Wednesday morning, the 7th instant, they had an opportunity of witnessing, in the person of a young gentleman, Mr. H., of Salisbury, a case of as inveterate stammering (especially in reading,) as has ever fallen under their observation. The impediment was not only distressing both to the sufferer and hearer, but was so extreme that scarcely a syllable he undertook to read was rendered intelligible.

The same young gentleman, after having been three days only under the care and treatment of Mr. CLARKE and Dr. ROY, of 41, Park-street, Grosvenor-square, came before us again on Saturday last, when, after an ample investigation, we found him completely cured; and not a trace of his previous malady could be discerned, either in reading or speaking.

London; May 12*th*, 1828.

GRANVILLE SHARP PATTISON,
JAMES JOHNSON, M.D. *Physician to his Royal Highness the Duke of Clarence*,
B. C. BRODIE,
BRANSBY B. COOPER, *Surgeon of Guy's Hospital.*

Anatomy.—A COMMITTEE of the House of Commons has been for some time engaged in investigating the present difficulties attending the study of anatomy. Among the various speeches made on the occasion, that of Sir JAMES MACKINTOSH was the most interesting, and we are rather surprised that it has not been noticed in any of the periodicals. We subjoin some parts of it, taken from the *Mirror of Parliament.*

That a knowledge of anatomy is to be acquired only by dissection,—that anatomical knowledge is the foundation of medical skill, as well as surgical expertness, and therefore the source of all the benefits which the beneficent arts of medicine and surgery have conferred on mankind, are propositions so nearly self-evident, that I should be ashamed to enforce them by argument before any tolerably well-informed assembly. That the laws, as they are now interpreted and administered, I know in England, and I believe in Scotland, throw obstacles in the way of the acquirement of this knowledge, insurmountable by the majority of those who are bound by law and conscience to acquire it, will, I think, appear with the utmost evidence from a comparison of two indisputable facts. The expense of dissection at Edinburgh is, at this moment, twenty times greater than it is at Paris. The annual number of those who study medicine at the various schools in the Island of Great Britain may be moderately estimated at 2000. It is much if one-fourth of that number be able to bear the expense of foreign residence, and of that preparatory instruction, without which study abroad is impracticable; to say nothing of the time required for such instruction, which would be better employed by the majority on their own profession; or of the weighty consideration that, if anatomy be banished, other medical sciences, which can only be well taught in her neighbourhood, must follow in her train. If, then, the law, and its present administration, go on to produce the full extent of their natural consequences, it is perfectly evident that the remaining three-fourths, by the expense of pursuing anatomy at home, and the expense and loss of time of pursuing it abroad, will be reduced to a state of anatomical ignorance, and consequent professional unskilfulness, of which no man can know that he may not himself be the victim, but by which it may be affirmed, with the most perfect assurance, that the poorer classes must be the chief sufferers,—both because they are the poorer, and because they are the most numerous. I entreat the House to ponder this most weighty consideration in their minds. The medical attendants of the superior classes will always be remunerated sufficiently to defray the expenses of a professional education, however they may be enhanced. But the middle classes will, in some degree, suffer; and the poor —that is, the majority and the more helpless portion of the British people,— will, in no long time, be delivered as victims to a race of low and ignorant practitioners. On which side of the question does humanity take her stand? Does she pronounce for the destruction or the protection of anatomy? I desire only that the matter before us may be tried by that issue. I would improve no part of knowledge at the expense of humanity: science is made for man, not man for science. The poorer classes are so much the most numerous, that their well-being must always be coincident with that of mankind. I earnestly beseech the House to consider their deep stake in this question. I feel a strong assurance that the growing intelligence of the people will resist every attempt to rouse the passions to arms against their own healths and lives. They have already outgrown prejudices as natural and equally mischievous. No incendiary can any longer lead them to destroy a granary. They show admirable sense, even in the midst of suffering, on the perplexing subject of machinery. They will, I trust, soon learn that the dissecting-room also is more essential to their welfare than to that of any other part of society.

Allow me to illustrate, by an imaginary case, the opposite effects of continuing to bar up, and of trying to widen, the only access to anatomical knowledge. If we were told that, in some desert region of central Africa, it was the practice of a tribe of savages to put to death annually a certain number of their own sick and wounded, we should surely listen to the story with a hope to find it false. But, if it were added that these murders were perpetrated, not by the instantaneous and merciful operation of the sword, the pistol, or the axe, but by a lingering torture for months or years, we would require the strongest evidence to induce us even to listen to such a charge against cannibals themselves. If we are told that we are ourselves chargeable with equal barbarity, should we not cry out, with the Syrian of old, " Is thy servant a dog, that he should do this thing?" But let us look at home. Let us not suffer ourselves to be paid in words, which, as was sharply and sagely said, " are the counters of wise men and the money of fools." What is the substantial difference between the supposed barbarity in Africa and the legal impediments to anatomy in Great Britain? In proportion to every degree in which anatomy declines and medicine sinks, an additional number of human lives must be cut short. If the healing arts preserve life, their decay must destroy it. That their improvement has contributed to that prolongation of its average duration which has taken place during the last half century, is what nobody but the most extravagant dealers in common-place paradox will venture to dispute. The mean length of life chiefly depends on the treatment of children, and the decline of medical science must be attended, in its very beginning, by a real, though not nominal, massacre of infants. If, indeed, it were to kill at a blow, it might be a blessing to many. But its victims will " die so slowly, none can call it murder." The bungling surgeon will make his instrument a means of more cruelty than the tomahawk; the ignorant physician will kill only by the protracted torture of disease.

Let every man, who calls out law or prejudice against dissection, consider whether he does not do his utmost to abate the means of lengthening life and (what is more important) of alleviating misery. Let him deeply reflect, whether an inconsiderate word may not make an orphan, and an inflammatory sentence may not cause unspeakable agony to hundreds. What a fearful responsibility does he incur to all those who may suffer from the blow which he has struck against the healing arts!

I should be most painfully perplexed if I thought myself, in this case, reduced to the sad necessity of choosing between the means of relief to bodily suffering, and the discipline which cultivates our moral feelings. I am not among those who underrate the rites of sepulture; still less the regard for the remains of the dead, which has prompted mankind in every age to hold these rites sacred. I believe that such a regard is inseparable from affection towards the living. As the cannibal feeds his ferocity by vindictively devouring the flesh of his enemies, so, it seems to me, funeral honours may be said, in some measure, to return and replenish those sacred fountains of kindness and compassion from which they flow. But I will not believe that the moral culture of man is at variance with his bodily welfare. I am convinced that inquiry will discover means, sanctioned by the experience of other countries, by which, while the noble science of anatomy, and the beneficent arts of medicine and surgery, are preserved among us, the alarms of affection may be appeased, and the sanctuary of the grave rendered more inviolable. I believe that a plan may be found, which will spare the feelings of every known or discoverable person; and I conceive that, to require more, would be fantastic extravagance. I believe, with equal confidence, that, if things go on as they now threaten, we shall close the better part of the means of instruction in the medical sciences; but that a miserable remnant must still be scantily supplied by that system of clandestine and contraband disinterment, which shocks the heart of the mourner,—degrades science, as well as renders its profession odious; and becomes, like smuggling and poaching, a school in which men are fitted for the worst crimes.

As to the dissection of suicides, which has been alluded to, it would surely be an act of wanton cruelty to survivors in all cases of insanity, and indeed in most others. London is the capital city in Europe where they are the most rare. The number is considerably greater in Paris, where the population is about one half. The dissection of murderers is evidently a resource of no importance. The average number of executions for murder in England and Wales has, during the last seven years, been only fourteen, or one in 850,000 persons. In London, the average of the same executions in the same time has been only five, being something more than one in 300,000 persons. When dissection was made part of the punishment for murder, it was a much more considerable resource to anatomy, which then demanded much less. According to a calculation which I have made with some care, it appears that nearly a century ago, in the year 1733, the whole executions in London were to the population as one to 10,000. In the last seven years, the whole executions in London have been to the population as one to 70,000. The relative number of executions for murder in the capital has diminished in a much greater proportion than that for all offences. I believe that the dissections for murder are injurious to the anatomist, by bringing new unpopularity upon his most beneficial occupation. It is at least certain that they are useless.

Positively to add to the terrors of the punishment of death, is impracticable in a civilised age. There is only one way in which penal law can contribute to keep up the national abhorrence of murder. It is by confining the punishment of death to that crime, and to those acts of cruelty, violence, or destruction, which partake of its nature, and often lead to its perpetration. The laws which alike punish with death the murderer of his father, the stealer of a sheep, and the forger of a bank-note, do their worst to drag down parricide to the level of sheep-stealing. It is no objection to this truth, that the humanity of Englishmen, formed and fostered by far other institutions, has hitherto maintained a successful struggle against these barbarising laws. We cannot add to capital punishment, but we may mightily strengthen its power by bringing its whole force to bear on the most atrocious crimes.

Bill to regulate the care of Insane Persons.—A BILL is now in progress through Parliament for the above purpose, and some idea may be gathered of its nature and tendency from the following observations, which we condensed from an anonymous pamphlet, containing some sensible remarks on the subject:

A party applying for a license is required, in the first place, to send in a most minute plan of the house, with a description of every room and apartment therein; and a statement of the number of patients to be received, and of keepers, distinguishing male from female, and servants to be employed therein; and if any addition or alteration shall be made to the house, notice is to be given, and an amended plan to be sent in within seven days.

In large establishments, a compliance with these regulations will, at all times, be extremely expensive and troublesome, and in many instances, owing to the great fluctuation in the number of patients, almost impracticable. Besides, the number varies with the rank and fortune of patients. One patient sometimes occupies several apartments; sometimes several inferior patients occupy a single room: either class may preponderate. Neither can it be known beforehand how many patients, or how many of either sex, there will be in a house at any one time; and, as the number of keepers and servants is regulated both by the rank as well as by the number and sex of the patients, it is impossible to state how many attendants will be kept. From the same causes, frequent alterations in the internal arrangements of the house become necessary. Yet, in all such cases, new plans are to be verified by the personal inspection of the clerk to the commissioners.

The license, too, is to be paid for according to the number of patients to be received: a regulation which, for the above reasons, cannot be strictly complied with; and, where two or three patients only are kept, £15 is too heavy a charge. £10 was before paid for a license for less than ten patients.

The notice of application for a license, and the license itself, is to contain the name and place of abode, not only of the person to whom the same is to be granted, but of every person interested in the profits of the house.

This is a useless inquisition into private concerns, as the person to whom the license is granted is alone responsible. It will likewise render it next to impossible to obtain pecuniary assistance towards placing an establishment on a respectable and proper footing; because advances for such purposes must, in most instances, be secured on the profits, and many people will object to having their names or property exposed to such hazardous contingencies as all these establishments would be rendered liable to.

The commissioners for the London district, and the justices of the peace in counties, may refuse to grant or renew the annual license, *without assigning any reason;* and against such decision there is no appeal!

Licenses may be revoked also by the same authorities; and such refusal or revocation is forthwith to be published in the London Gazette, or a county newspaper. If, after such publication, the proprietor continues to keep two or more patients for fourteen days, he is declared guilty of a misdemeanour. No provision, however, is made for the disposal of the patients in such event. In many instances their friends reside on the continent, or in the East or West Indies; or there is no immediate relation who will receive them, or they are wards of the Court of Chancery; and in that time, perhaps, the patient could not be disposed of. The proprietor of the house must either turn all these helpless beings adrift, or retain them at the risk of a prosecution.

In houses situate out of the London district, the number of visitors is unlimited.

The commissioners are authorised to visit houses by night as well as by day. The exercise of this power will always be attended with the most injurious consequences to patients, independent of the stigma thereby necessarily cast on the superintendent of the house. Night visits could not be made without disturbing and violently agitating most of the inmates. To delicate females especially, as well as to convalescents, whether actually inspected or not, such a visitation would probably prove dangerous.

The lord chancellor, and either of the lords chief justices, may direct, not merely, as at present, the commissioners alone, but any person whatever, *to* visit any house; and a similar power is now given to the secretary of state for the home department.

In addition to the regular commissioners and visitors, the rector, vicar, or curate of the parish, is likewise authorised, with their consent, to visit houses, though no adequate reason can well be assigned why such visitation should be permitted; and, as the superintendent is to admit or refuse the clergyman at his own discretion, such a clause is perfectly nugatory, but yet may raise much ill-will between the resident clergyman, the visitors, and the superintendent.

The *lunatics* themselves, too, are at liberty to require the assistance of any minister or spiritual teacher; and the reason for refusing it is to be registered! The patient, however, is the last person to whom such a power ought to be given; but, when he learns that the law sanctions his request, it will be constantly preferred, and the refusal of it be a cause of prejudice against the superintendent, for whom every patient ought to possess great respect.

In cases where the disease is connected with religious feelings, such communications, if indulged, might tend to increase it; and a refusal, though in itself judicious and necessary, will almost invariably cause irritation in the mind of the patient.

The certificate necessary to the admission of a patient is to be signed by two medical practitioners, who shall have *separately* examined the party.

The commissioners and visitors are empowered to discharge patients; yet, in many instances, they must, particularly if not medical men, be wholly incompetent to decide on the propriety of such discharge. A more striking example of this cannot be given than is to be found in the evidence of Dr. Latham, the president of the College of Physicians, before the committee of the House of Commons, in 1815, which shall be stated in his own words:

"The first time I was a commissioner, we examined a house at Plaistow: there were two women confined, whom I thought were not insane. The keeper said they were, and that we were mistaken. We desired them to write to their friends to give them a trial. We were all of opinion these women were improperly confined, and desired their friends would take them out. Upon our next visitation, the following year, I had, of course, considerable curiosity to know what had become of these two people: one had drowned herself, and the other had hanged herself."

The clauses authorising one commissioner or justice of the peace to order the secretary of the commissioners, or clerk of the peace, to divulge to any person the name and place of residence of any lunatic; requiring a return to be made of a single patient received into a house; and empowering the lord chancellor, or secretary of state, to appoint any person to visit any lunatic under the care of a relation or friend, are destructive of all that privacy which is so truly desirable for the patient, and a most serious inquisition into domestic afflictions. Misfortunes, which every relation is anxious to keep secret, on account of the patient as well as of himself, will thus be made public; so that the very object which the legislature professes to have in view—that of ameliorating the condition of the unhappy persons subject to this malady, will be, in respect to those insane who demand the most delicate consideration, entirely defeated.

How far the power given to *visit and examine any insane person who shall be confined, in the care of any relative or friend, or in the exclusive care of any other person,* is or is not an outrage on domestic privacy, and the free agency which every Englishman has felt himself hitherto entitled to exercise in his own family, every one is able to judge; but those can best appreciate who are personally interested in this extraordinary enactment.

We understand that Dr. Birkbeck is about retiring from the appointment of Physician to the General Dispensary, Aldersgate-street. The present candidates for the office are Dr. Woodforde and Dr. C. J. Roberts.

MONTHLY LIST OF MEDICAL BOOKS.

[*Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.*]

A Treatise on Gout, Apoplexy, Paralysis, and Disorders of the Nervous System. By A. Rennie, Surgeon, &c.—8vo. pp. 213. Burgess and Hill, London, 1828.

Hints to Young Medical Officers of the Army on the Examination of Recruits, and respecting the feigned Disabilities of Soldiers; with Official Documents, and the Regulations for the Inspection of Conscripts for the French and Prussian Armies. By Henry Marshall, Surgeon to the Forces.—8vo. pp. 224. Burgess and Hill, London, 1828.

Observations on Strictures of the Rectum, and other Affections of the Intestinal Canal; including Hæmorrhoidal Tumors (called Piles), accompanied with the Mode of Treatment by the late W. White, Esq. By Samuel White, Member of the Royal College of Surgeons, London. Fifth Edition.—8vo. pp. 110, and Plates. Hunt, Bath, 1828.

A Clinical Lecture delivered to the Students of Surgery in the Royal Infirmary of Edinburgh, at the conclusion of the Winter Course for 1827-28. By George Ballingall, M.D. F.R.S.E. &c.—4to. pp. 29. Edinburgh, 1828.

An Investigation of the Properties of the Thames Water. By William Lambe, M.D. Fellow of the Royal College of Physicians.—8vo. pp. 65. T. Butcher, and T. and G. Underwood, London, 1828.

A Dissertation on the Nature and Properties of the Malvern Water, and an Enquiry into the Causes and Treatment of Scrofulous Diseases and Consumption; together with some Remarks upon the Influence of the Terrestrial Radiation of Caloric upon local Salubrity. By William Addison, Surgeon. —8vo. pp. 192. Callow and Wilson, London, 1828.

METEOROLOGICAL JOURNAL,

From April 20th, to May 20th, 1828.

By Messrs. Harris and Co. Mathematical Instrument Makers, 50, High Holborn.

April	Rain gauge.	Moon.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Varaitions.		
			9 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 *a.m.*	2 *p.m.*	10 *p.m.*
20			47	50	43	29.67	29.57	98	98	SE	ENE	Cloudy	Cloudy	Sleet
21	.15		46	49	39	29 60	29.54	96	98	NE	N	Rain	Show'ry	Rain
22		☽	44	50	44	29.51	29.60	94	98	W	WSW	Cloudy	Cloudy	Cloudy
23	•		49	56	47	29.67	29.70	97	98	NW	W	—	—	Rain
24			55	60	50	29.67	29.76	88	94	NW	W	Fair	Fair	Fair
25			56	59	47	29.78	29.62	92	84	SW	WSW	—	Cloudy	Cloudy
26			54	59	46	29.85	30.01	80	79	NW	WNW	—	Fine	Fine
27			60	65	48	30.06	30.10	80	80	W	WSW	—	—	—
28			64	70	53	30.14	30.15	80	78	SW	SW	—	—	—
29		○	68	72	57	30.11	30.07	75	84	SW	WSW	—	—	—
30			62	64	48	30.19	30.21	90	90	NNE	SE	—	—	—
May														
1			54	63	45	30.24	30.18	90	90	S	ENE	—	—	Fair
2			51	61	48	30.12	30.03	90	94	SE	SE	—	—	Cloudy
3			52	60	50	29.98	29.84	96	98	SE	S	Rain	Rain	—
4	.13		58	63	48	29.76	29.63	98	98	WNW	NNW	—	—	Fair
5			57	59	46	29.57	29.57	85	86	NW	NW	Cloudy	Fair	—
6		☾	54	58	45	29.60	29.67	88	92	W	NNW	Fair	—	—
7			51	60	46	29.71	29.75	97	98	NE	NE	—	—	Rain
8			47	59	43	29.75	29.83	98	96	E	ENE	Rain	—	Fine
9			54	62	47	29.92	30.02	90	88	N	WNW	Fair	Fine	—
10			57	66	53	30.04	30.00	80	90	WNW	W	—	—	—
11			59	63	51	30.00	30.04	85	88	ENE	ENE	—	—	—
12			54	64	47	30.07	30.16	88	87	ENE	ENE	—	—	—
13		●	57	65	51	30.12	30.09	85	92	SW	ENE	—	—	—
14			62	65	47	30.05	30.00	90	90	E	E	—	—	—
15			58	67	58	29.94	29.85	90	90	ESE	E	—	—	—
16			63	70	57	29.74	29.74	90	90	E	ENE	—	—	—
17			64	68	56	29.70	29.69	90	94	E	E	—	—	Sleet
18			58	63	47	29.70	29.70	92	89	SSE	ESE	—	—	Fine
19			58	68	48	29.70	29.71	88	78	SSE	E	—	—	—

The quantity of Rain fallen in the month of April, was 1 inch and 95.100ths.

NOTICES.

*We regret that we cannot insert the Paper signed "*Caution;*" for, though we agree in the prudence of aiding the invitation from the Russian government to our medical men to serve in their army, we dissent from the reflections against the medical department at home.*

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J. and C. Adlard, Printers, Bartholomew Close.

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Received October 6, 1906